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FEDERAL REGISTER

Vol. 81 Tuesday,
No. 95 May 17, 2016

Pages 30483–31160

OFFICE OF THE FEDERAL REGISTER

1985

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Rules and Regulations

Federal Register
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This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

FARM CREDIT SYSTEM INSURANCE CORPORATION

12 CFR Part 1411

RIN 3055–AA11

Rules of Practice and Procedure; Adjusting Civil Money Penalties for Inflation

AGENCY: Farm Credit System Insurance Corporation.

ACTION: Final rule.

SUMMARY: This rule implements inflation adjustments to civil money penalties (CMPs) that the Farm Credit System Insurance Corporation (FCSIC) may impose under the Farm Credit Act of 1971, as amended. These adjustments are required by 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990.

DATES: This rule is effective on August 1, 2016.

FOR FURTHER INFORMATION CONTACT: Howard Rubin, General Counsel, Farm Credit System Insurance Corporation, 1501 Farm Credit Drive, McLean, Virginia 22102, (703) 883–4380, TTY (703) 883–4390.

SUPPLEMENTARY INFORMATION:

A. Background

The Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (the 2015 Act) amended the Federal Civil Penalties Inflation Adjustment Act of 1990 (the Inflation Adjustment Act)[1] to improve the effectiveness of civil monetary penalties and to maintain their deterrent effect. The Inflation Adjustment Act provides for the regular evaluation of CMPs and requires FCSIC, and every other Federal agency with authority to impose CMPs, to ensure that CMPs continue to maintain their deterrent values.[2]

FCSIC must enact regulations that adjust its CMPs pursuant to the inflation adjustment formula of the amended Inflation Adjustment Act and rounded using a method prescribed by the Inflation Adjustment Act. The new amounts will apply to penalties assessed on or after the effective date of this rule. Agencies do not have discretion in choosing whether to adjust a CMP, by how much to adjust a CMP, or the methods used to determine the adjustment.

B. CMPs Imposed Pursuant to Section 5.65 of the Farm Credit Act

First, section 5.65(c) of the Farm Credit Act, as amended (Act), provides that any insured Farm Credit System bank that willfully fails or refuses to file any certified statement or pay any required premium shall be subject to a penalty of not more than $100 for each day that such violations continue, which penalty FCSIC may recover for its use.[3] Second, section 5.65(d) of the Act provides that, except with the prior written consent of the Farm Credit Administration, it shall be unlawful for any person convicted of any criminal offense involving dishonesty or a breach of trust to serve as a director, officer, or employee of any System institution.[4] For each willful violation of section 5.65(d), the institution involved shall be subject to a penalty of not more than $100 for each day during which the violation continues, which FCSIC may recover for its use.

FCSIC's current § 1411.1, promulgated in 2001 pursuant to the Inflation Adjustment Act as then in effect, provides that FCSIC can impose a maximum penalty of $117 per day for a violation under section 5.65(c) and (d) of the Act. FCSIC has not been required to make adjustments under the Inflation Adjustment Act since 2001.[5]

C. Required Adjustments

The 2015 Act requires agencies to (1) adjust the level of civil monetary penalties with an initial "catch-up" adjustment through an interim final rulemaking (IFR) and (2) make subsequent annual adjustments for inflation. Catch-up adjustments are based on the percent change between the Consumer Price Index for all Urban Consumers (CPI–U) for the month of October of the year in which the CMP was established or adjusted (other than through Inflation Adjustment Act adjustments), and the October 2015 CPI–U. Annual inflation adjustments will be based on the percent change between the October CPI–U preceding the date of the adjustment and the prior year's October CPI–U. CMPs provided for in section 5.65 of the Act were enacted in 1988 and not subsequently changed (other than through Inflation Adjustment Act adjustments). In accordance with guidance issued by the Office of Management and Budget (pursuant to a directive in the 2015 Act), FCSIC must multiply the maximum amount of civil money penalty provided for in section 5.65(c) and (d) of the Farm Credit Act ($100) by 1.97869.[6] This results in a revised penalty amount of $198, after rounding to the nearest dollar as required by the 2015 Act.

D. Notice and Comment Not Required by Administrative Procedure Act

The 2015 Act specifically directs Federal agencies to "adjust civil money penalties through an interim final rulemaking" and the Inflation Adjustment Act gives agencies no discretion in the calculation of the adjustment. Therefore, FCSIC concludes that public notice and an opportunity to comment are not necessary or appropriate under the Administrative Procedure Act and adopts this rule in final form.

E. Regulatory Flexibility Act

Pursuant to section 605(b) of the Regulatory Flexibility Act,[7] FCSIC hereby certifies that this final rule will not have a significant economic impact on a substantial number of small entities. Each of the banks of the Farm Credit System, together with their affiliated associations, has assets and annual income in excess of amounts that would qualify them as "small entities" under the Regulatory Flexibility Act.

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[1] Public Law 101–410, Oct. 5, 1990, 104 Stat. 890, as amended by Public Law 104–134, title III, sec. 31001(s)(1), Apr. 26, 1996, 110 Stat. 1321–373; Public Law 105–362, title XIII, sec. 1301(a), Nov. 10, 1998, 112 Stat. 3293; Public Law 114–74, title VII, sec. 701(b), Nov. 2, 2015, 129 Stat. 599.

[2] Under the amended Inflation Adjustment Act, a CMP is defined as any penalty, fine, or other sanction that: (1) Either is for a specific monetary amount as provided by Federal law or has a maximum amount provided for by Federal law; (2) is assessed or enforced by an agency pursuant to Federal law; and (3) is assessed or enforced pursuant to an administrative proceeding or a civil action in the Federal courts. All three requirements must be met for a fine to be considered a CMP.

[3] 12 U.S.C. 2277a–14(c).

[4] 12 U.S.C. 2277a–14(d).

[5] FCSIC's most recent notice assessing the need for cost-of-living adjustments to CMPs was published on October 24, 2013 (78 FR 63465).

[6] OMB Memorandum M–16–06 (Feb. 24, 2015).

[7] 5 U.S.C. 601, *et seq.*

List of Subjects in 12 CFR Part 1411

Banks, Banking, Civil money penalties, Penalties.

For the reasons stated in the preamble, part 1411 of chapter XIV, title 12 of the Code of Federal Regulations is amended as follows:

PART 1411—RULES OF PRACTICE AND PROCEDURE

■ 1. The authority citation for part 1411 continues to read as follows:

Authority: Secs. 5.58(10), 5.65(c) and (d) of the Farm Credit Act (12 U.S.C. 2277a–7(10), 2277a–14(c) and (d)); 28 U.S.C. 2461 note.

■ 2. Revise § 1411.1 to read as follows:

§ 1411.1 Inflation adjustment of civil money penalties for failure to file a certified statement, pay any premium required or obtain approval before employment of persons convicted of criminal offenses.

In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990, as amended, a civil money penalty imposed pursuant to section 5.65(c) or (d) of the Farm Credit Act of 1971, as amended, for a violation occurring on or after August 1, 2016 shall not exceed $198 per day for each day the violation continues.

Dated: May 12, 2016.

Dale L. Aultman,

Secretary to the Board, Farm Credit System Insurance Corporation.

[FR Doc. 2016–11675 Filed 5–16–16; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2016–0070; FRL–9945–24–Region 9]

Approval of California Air Plan Revisions, Eastern Kern Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking direct final action to approve revisions to the Eastern Kern Air Pollution Control District (EKAPCD) portion of the California State Implementation Plan (SIP). These revisions concern administrative changes of a previously approved regulation and emissions of volatile organic compounds (VOCs) in aerospace assembly and coating operations and in metal, plastic and pleasure craft parts and products coating operations. We are approving local rules that regulate these activities under the Clean Air Act (CAA or the Act).

DATES: This rule is effective on July 18, 2016 without further notice, unless the EPA receives adverse comments by June 16, 2016. If we receive such comments, we will publish a timely withdrawal in the **Federal Register** to notify the public that this direct final rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2016–0070 at *http://www.regulations.gov,* or via email to *Steckel.Andrew@epa.gov.* For comments submitted at *Regulations.gov,* follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov.* For either manner of submission, the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: Vanessa Graham, EPA Region IX, (415) 947–4120, *graham.vanessa@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us," and "our" refer to the EPA.

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I. The State's Submittal

A. What rules did the State submit?

Table 1 lists the rules addressed by this action with the dates that they were adopted by the local air agency and submitted by the California Air Resources Board (CARB).

TABLE 1—SUBMITTED RULES

Local agency	Rule #	Rule title	Adopted	Amended	Submitted
EKAPCD	103.1	Inspection of Public Records		05/02/96	07/23/96
EKAPCD	410.4	Metal, Plastic, and Pleasure Craft Parts and Products Coating Operations.		03/13/14	07/25/14
EKAPCD	410.8	Aerospace Assembly and Coating Operations	03/13/14		07/25/14

On October 30, 1996, the EPA determined that the submittal for EKAPCD Rule 103.1 met the completeness criteria in 40 CFR part 51 Appendix V, which must be met before formal EPA review. On September 11, 2014, the EPA determined that the submittal for EKAPCD Rules 410.4 and 410.8 met the completeness criteria as well.

B. Are there other versions of these rules?

EKAPCD adopted an earlier version of Rule 103.1 on August 31, 1976, which CARB submitted to us on November 10,

1976. This rule was approved into the SIP on March 22, 1978 (43 FR 11816). EKAPCD adopted revisions to the SIP-approved version of Rule 103.1 on May 2, 1996, and CARB submitted the revised rule to us on July 23, 1996.

EKAPCD amended an earlier version of Rule 410.4 on March 7, 1996, and CARB submitted it to us on May 10, 1996. We approved the earlier version of 410.4 into the SIP on January 13, 2000 (65 FR 2046). EKAPCD adopted revisions to the SIP-approved version of Rule 410.4 on March 13, 2014, and CARB submitted it to us on July 25, 2014.

There are no previous versions of Rule 410.8 in the SIP. EKAPCD adopted Rule 410.8 on March 13, 2014, and submitted it to us on July 25, 2014.

While we can act on only the most recently submitted version, we have reviewed materials provided with previous submittals.

C. What is the purpose of the submitted rules and rule revisions?

VOCs help produce ground-level ozone, smog and particulate matter (PM), which harm human health and the environment. Section 110(a) of the CAA requires States to submit regulations that control VOC emissions.

Rule 103.1 supports some of the basic infrastructure SIP requirements described in section 110(a) of the CAA with respect to public records access. The submitted version of Rule 103.1 contains only minor typographical changes from the version that we previously approved into the SIP in 1978, and is identical in substance to the SIP-approved version.

Rule 410.4 limits the VOC content and establishes related requirements for the coating of metal parts or products, large appliance parts or products, metal furniture, and plastic parts or products. EKAPCD revised the rule largely to be consistent with national guidance and with the rules of neighboring air districts.

Rule 410.8 limits VOC emissions from aerospace primers, coatings, adhesives, maskants and lubricants, as well as from cleaning, stripping, storing and disposal of organic solvents and waste materials associated with the use of the abovementioned aerospace products. This rule also provides for administrative requirements including those for recordkeeping and measurement of VOC emissions.

The EPA's technical support documents (TSDs) have more information about these rules.

II. The EPA's Evaluation and Action

A. How is the EPA evaluating the rules?

SIP rules must be enforceable (see CAA section 110(a)(2)), must not interfere with applicable requirements concerning attainment and reasonable further progress or other CAA requirements (see CAA section 110(l)), and must not modify certain SIP control requirements in nonattainment areas without ensuring equivalent or greater emissions reductions (see CAA section 193).

Generally, SIP rules must require Reasonably Available Control Technology (RACT) for each category of sources covered by a Control Techniques Guidelines (CTG) document as well as each major source of VOCs in ozone nonattainment areas classified as moderate or above (see CAA sections 182(b)(2)). EKAPCD regulates an ozone nonattainment area classified as Marginal[1] for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). In addition, EKAPCD is classified as Moderate for the 1997 8-hour ozone NAAQS (40 CFR 81.305). Since Rules 410.4 and 410.8 regulate sources subject to a CTG in a nonattainment area, they must implement RACT.

Guidance and policy documents that we used to evaluate enforceability, revision/relaxation and rule stringency requirements for the applicable criteria pollutants include the following:

1. "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," (57 FR 13498, April 16, 1992, and 57 FR 18070, April 28, 1992).
2. "Issues Relating to VOC Regulation Cutpoints, Deficiencies, and Deviations" ("the Bluebook," U.S. EPA, May 25, 1988; revised January 11, 1990).
3. "Guidance Document for Correcting Common VOC & Other Rule Deficiencies" ("the Little Bluebook," EPA Region 9, August 21, 2001).
4. "Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations" (EPA 453/R–97–004, December 1997).
5. Guidance Memorandum for "Control Technique Guidelines for Miscellaneous Metal and Plastic Parts Coating" (EPA 453/R–08–003, June 2010).
6. "Control Technique Guidelines for Miscellaneous Metal and Plastic Parts Coating" (EPA 453/R–08–003, September 2008).
7. "Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2)," USEPA Memorandum dated September 13, 2013.
8. "Review of State Regulation Recodifications," USEPA Memorandum dated February 12, 1990.

B. Do the rules meet the evaluation criteria?

We believe these rules are consistent with the relevant policy and guidance regarding enforceability, RACT and SIP relaxations. The TSDs have more information on our evaluation.

C. EPA recommendations to further improve the rules and rule revisions?

The TSDs describe additional rule revisions that we recommend for the next time the local agency modifies the rules but are not currently the basis for rule disapproval.

D. Public Comment and Final Action

As authorized in section 110(k)(3) of the Act, the EPA is fully approving the submitted rules because we believe they fulfill all relevant requirements. We do not think anyone will object to this approval, so we are finalizing it without proposing it in advance. However, in the Proposed Rules section of this **Federal Register**, we are simultaneously proposing approval of the same submitted rules. If we receive adverse comments by June 16, 2016, we will publish a timely withdrawal in the **Federal Register** to notify the public that the direct final approval will not take effect and we will address the comments in a subsequent final action based on the proposal. If we do not receive timely adverse comments, the direct final approval will be effective without further notice on July 18, 2016. This will incorporate these rules into the federally enforceable SIP.

Please note that if the EPA receives adverse comment on an amendment, paragraph, or section of this rule and if that provision may be severed from the remainder of the rule, the EPA may adopt as final those provisions of the rule that are not the subject of an adverse comment.

III. Incorporation by Reference

In this rule, the EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is finalizing the incorporation by reference of the EKAPCD rules described in the amendments to 40 CFR part 52 set forth below. The EPA has made, and will continue to make, these documents available electronically through *www.regulations.gov* and in hard copy at the appropriate EPA office (see the **ADDRESSES** section of this preamble for more information).

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[1] See 80 FR 51992, August 27, 2015.

IV. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by July 18, 2016. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the Proposed Rules section of today's **Federal Register**, rather than file an immediate petition for judicial review of this direct final rule, so that the EPA can withdraw this direct final rule and address the comment in the proposed rulemaking. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, and Volatile organic compounds.

Dated: April 4, 2016.

Jared Blumenfeld,

Regional Administrator, Region IX.

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

PART 52 [AMENDED]

■ 1. The authority citation for Part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart F—California

■ 2. Section 52.220 is amended by adding paragraphs (c)(35)(xiii)(F), (c)(231)(i)(B)(*8*), (c)(239)(i)(C)(*6*), and (c)(447)(i)(D)(*2*) and (*3*) to read as follows:

§ 52.220 Identification of plan.

* * * * *

(c) * * *

(35) * * *

(xiii) * * *

(F) Previously approved on March 22, 1978, in paragraph (c)(35)(xiii)(A) of this section and now deleted with replacement in paragraph (c)(239)(i)(C)(*6*) of this section, Rule 103.1, "Inspection of Public Records," adopted on August 31, 1976.

* * * * *

(231) * * *

(i) * * *

(B) * * *

(*8*) Previously approved on January 13, 2000, in paragraph (c)(231)(i)(B)(*6*) of this section and now deleted with replacement in paragraph (c)(447)(i)(D)(*2*) of this section, Rule 410.4, "Surface Coating of Metal Parts and Products," amended on March 7, 1996.

* * * * *

(239) * * *

(i) * * *

(C) * * *

(*6*) Rule 103.1, Inspection of Public Records," amended on May 2, 1996.

* * * * *

(447) * * *

(i) * * *

(D) * * *

(*2*) Rule 410.4, "Metal, Plastic, and Pleasure Craft Parts and Products Coating Operations," amended on March 13, 2014.

(*3*) Rule 410.8, "Aerospace Assembly and Coating Operations," adopted on March 13, 2014.

* * * * *

[FR Doc. 2016–11516 Filed 5–16–16; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Part 411

[CMS–6054–F]

RIN 0938–AR90

Medicare Program; Obtaining Final Medicare Secondary Payer Conditional Payment Amounts via Web Portal

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Final rule.

SUMMARY: This final rule specifies the process and timeline for expanding CMS' existing Medicare Secondary Payer (MSP) Web portal to conform to section 201 of the Medicare IVIG and Strengthening Medicare and Repaying Taxpayers Act of 2012 (the SMART Act). The final rule specifies a timeline for developing a multifactor authentication solution to securely permit authorized users other than the beneficiary to access CMS' MSP conditional payment amounts and claims detail information via the MSP Web portal. It also requires that we add functionality to the existing MSP Web portal that permits users to: Notify us that the specified case is approaching settlement; obtain time and date stamped final conditional payment summary statements and amounts before reaching settlement; and ensure that relatedness disputes and any other discrepancies are addressed within 11 business days of receipt of dispute documentation.

DATES: These regulations are effective June 16, 2016.

FOR FURTHER INFORMATION CONTACT: Suzanne Mattes, (410) 786–2536.

SUPPLEMENTARY INFORMATION:

I. Background

The Medicare IVIG and Strengthening Medicare and Repaying Taxpayers Act of 2012 (the SMART Act) was enacted on January 10, 2013. Section 201 of the SMART Act amends section 1862(b)(2)(B) of the Social Security Act (the Act) and requires the establishment of an internet Web site (referred to as the "Web portal") through which beneficiaries, their attorneys or other representatives, and authorized applicable plans (as defined in section 1862(b)(8)(F) of the Act (42 U.S.C. 1395y(b)(8)(F)) who have pending liability insurance (including self-insurance), no-fault insurance, or workers' compensation settlements, judgments, awards, or other payments, may access related CMS' MSP conditional payment amounts and claims detail information.

The existing MSP Web portal currently permits authorized users (including beneficiaries, attorneys, or other representatives) and applicable plans to register through the Web portal in order to access MSP conditional payment amounts electronically and update certain case-specific information online.

Beneficiaries are able to log into the existing Web portal by logging into their *MyMedicare.gov* accounts. The Web portal provides detailed data on claims that Medicare paid conditionally that are related to the beneficiary's liability insurance (including self-insurance), no-fault insurance, or workers' compensation settlement, judgment, award, or other payment (hereinafter, for ease of reference, referred to as "settlement(s)"). This detailed claims data for each claim includes dates of service, provider information, total charges, conditional payment amounts, and diagnosis codes.

Beneficiaries' attorneys or other representatives, as well as applicable plans, may register through the Web portal to access conditional payment information. In order to comply with federal privacy and security requirements, including the Federal Information Security Management Act (FISMA), we have implemented a multifactor authentication tool that will permit authorized individuals, other than the beneficiary, to securely access detailed conditional payment information through the Web portal.

Once the beneficiary's attorney or other representative is designated as an authorized user, he or she may log into the Web portal to view the conditional payment amount and perform certain actions, which include addressing discrepancies by disputing claims and uploading settlement information. It is important to note that, in situations where there is a pending insurance or workers' compensation settlement, the beneficiary is designated as the "identified debtor". This means that only the beneficiary and his or her attorney or other representative have the authority to take action on the beneficiary's MSP recovery case. This includes disputing claims and requesting a final conditional payment amount through the Web portal. An applicable plan is only able to take these actions if it submits proper proof of representation. The applicable plan cannot take action on a beneficiary's case unless it has obtained proof of representation that authorizes it to act on behalf of the beneficiary.

In keeping with the requirements of the SMART Act, we have added functionality to the existing Web portal that permits users to notify us when the specified case is approaching settlement, download or otherwise obtain time and date stamped final conditional payment summary statements and amounts before reaching settlement, and ensure that relatedness disputes and any other discrepancies are addressed within 11 business days of receipt of dispute documentation.

II. Provisions of the Interim Final Rule With Comment and Analysis of and Response to Public Comments

A. Introduction

In the September 20, 2013 **Federal Register** (78 FR 57800), we published an interim final rule with comment period (IFC) that specified a timeline for developing a multifactor authentication solution to securely permit authorized users other than the beneficiary to access CMS' MSP conditional payment amounts and claims detail information via the MSP Web portal. It also required that we add functionality to the existing MSP Web portal that permits users to: Notify us that the specified case is approaching settlement; obtain time and date stamped final conditional payment summary statements and amounts before reaching settlement; and ensure that relatedness disputes and any other discrepancies are addressed within 11 business days of receipt of dispute documentation. We received 21 timely public comments. In this final rule, we provide a general overview of the public comments received by subject area, with a focus on the most common issues and suggestions raised.

B. Definitions

In the September 2013 IFC (78 FR 57804), we defined "Applicable plan" as the following laws, plans, or other arrangements, including the fiduciary or administrator for such law, plan or arrangement:

- Liability insurance (including self-insurance).
- No fault insurance.
- Workers' compensation laws or plans.

We also defined "Medicare Secondary Payer conditional payment information" as a term that means all of the following:

- Dates of service.
- Provider names.
- Diagnosis codes.
- Conditional payment amounts.
- Claims detail information.

Comment: Many commenters requested that we define certain terms in the regulation.

Response: We note we have defined "applicable plan" in § 411.39(a) of the regulation text.

We note that we are removing the definition of "Medicare Secondary Payer conditional payment information" to avoid redundancy and confusion. The language of the rule, itself, specifies which pieces of conditional payment information will be available via Web portal, based upon the level of authorization the user has when he or she accesses the Web portal.

C. Accessing Conditional Payment Information Through the Medicare Secondary Payer Web Portal

In the September 2013 IFC (78 FR 57801), we noted that we will continue to provide beneficiaries with access to details on claims related to their pending settlements through the Web portal. This will include dates of service, provider names, diagnosis codes, and conditional payment amounts. Beneficiaries and their attorneys or other representatives will continue to be able to dispute the relatedness of claims and submit a notice of settlement and other types of documentation through the Web portal. We have added functionality that will permit beneficiaries to download or otherwise electronically obtain time and date stamped payment summary statements, and exchange other information securely with Medicare's contractor via the Web portal.

A beneficiary's attorney or other representative and the applicable plan will continue to be able to register to use the Web portal and access conditional payment amounts. To access more detailed information related to a beneficiary's pending settlement, users will register to use a multifactor authentication process, as defined in and required by the most recent version of the CMS Enterprise Information Security Group Risk Management Handbook, Volume III, Standard 3.1, CMS Authentication Standards, developed in accordance with FISMA and regulations promulgated by the National Institute of Standards and Technology (NIST). The most recent version of CMS' Risk Management Handbook can be found at *http://www.cms.gov/Research-Statistics-Data-and-Systems/CMS-Information-Technology/InformationSecurity/Downloads/RMH_VIII_3-1_Authentication.pdf.*

With this tool, a beneficiary's authorized attorney or other representatives or an authorized applicable plan that has appropriately registered to access the Web portal, and has registered to use the multifactor authentication tool, has access to more detailed MSP conditional payment information for a specified MSP recovery case. This additional information includes dates of services, provider names, diagnosis codes, as well as the conditional payment amounts already available through the Web portal. If an authorized user does not register to use the multifactor authentication tool, he or she will continue to have access to the conditional payment amounts and he or she will continue to be able to perform certain functions, but details, including dates of service, provider names, diagnosis codes, will not be visible to that user.

Comment: Many commenters stated that beneficiaries should not be required to set up separate accounts to access the Web portal because they can already access the information on the Web portal through their *MyMedicare.gov* accounts.

Response: The provisions of the September 2013 IFC do not require that beneficiaries set up separate accounts. Beneficiaries who access the existing Web portal are instructed to login to their *MyMedicare.gov* accounts. Beneficiaries will continue to access information on the Web portal through their *MyMedicare.gov* accounts.

Comment: Many commenters stated that "pre-registration" to use the Web portal negates its utility and pre-registration should not be required.

Response: To clarify, registration is already required when accessing the existing Web portal for the first time. Once an authorized user has access to the portal, the user may, at any time, elect to register to use the multifactor authentication tool to access more detailed information. We note that authorized users will be able to view information on the Web portal, regardless of whether the beneficiary has accessed the portal or logged in through *MyMedicare.gov.*

Comment: Many commenters stated that multifactor authentication is not needed because CMS already provides this information by mail and it will delay development of the Web portal solution.

Response: We require written proof of representation or consent to release (depending on the nature of the relationship between the beneficiary and the individual or entity requesting the beneficiary's information) before we provide privacy protected information, by mail or by phone, to authorized representatives or other authorized individuals or entities. To provide information that is categorized as personally identifiable information via the internet, all government agencies, including CMS, are bound by statutory requirements imposed by the Federal Information Security Management Act (FISMA), as well as security regulations promulgated by the National Institute of Standards and Technology. For more information on security requirements, see section II.D. of this final rule.

D. Obtaining a Final Conditional Payment Amount

In the September 2013 IFC (78 FR 57801), we noted that once the beneficiary, his or her attorney or other representative, or an applicable plan provides notice of pending liability insurance (including self-insurance), no-fault insurance, and workers' compensation settlements, judgments, awards, or other payments to the appropriate Medicare contractor, the Medicare contractor will compile and post claims that are related to the pending settlement for which Medicare has paid conditionally. Once a recovery case is established and posted on the Web portal, the beneficiary, or his or her attorney, other representative, or authorized applicable plan may access the recovery case through the Web portal, and notify CMS once—and only once—that a settlement is expected to occur in 120 days or less. Conditional payment information will be posted to the Web portal within 65 days or less of receipt of the notice of the pending settlement.

Section 1862(b)(2)(B)(vii)(V) of the Act permits us to extend our response timeframe by an additional 30 days if we determine that additional time is required to address related claims that Medicare has paid conditionally. We anticipate that such situations would include, but are not limited to, the following:

- A recovery case that requires CMS' contractor to review the systematic filtering of associated claims for a case and subsequently adjust those filters manually to ensure that claims are related to the pending settlement.
- CMS' systems failures that do not otherwise fall within the definition of exceptional circumstances.

Section 1862(b)(2)(B)(vii)(V) of the Act also permits us to further extend our claims compilation response timeframe by the number of days required to address the issue(s) that result from "exceptional circumstances" pertaining to a failure in the claims and payment posting system. Per the statute, such situations must be defined in regulations in a manner such that "not more than 1 percent of the repayment obligations . . . would qualify as exceptional circumstances.” Therefore, we are adding new regulations at 42 CFR 411.39 that define exceptional circumstances to include, but not be limited to: System failure(s) due to consequences of extreme adverse weather (loss of power, flooding, etc.); security breaches of facilities or network(s); terror threats; strikes and similar labor actions; civil unrest, uprising or riot; destruction of business property (as by fire, etc.); sabotage; workplace attack on personnel; and similar circumstances beyond the ordinary control of government or private sector officers or management.

If the beneficiary, or his or her authorized attorney or other representative, believes that claims included in the most up-to-date conditional payment summary statement are unrelated to the pending liability insurance (including self-insurance), no-fault insurance, or workers’ compensation settlement, he or she may address discrepancies through the dispute process available through the Web portal. The beneficiary, or his or her authorized attorney or other representative, may dispute the relatedness of an individual conditional payment once and only once. The beneficiary or his or her authorized attorney or other representative may be required to submit additional supporting documentation in a form and manner specified by the Secretary to support the assertion that the disputed conditional payment is unrelated to the settlement. If the Medicare contractor does not accept a dispute for a particular conditional payment, that conditional payment will remain part of the total conditional payment amount and may not be disputed through this process again.

Once CMS has been notified that a pending settlement is 120 days or less from settlement, disputes submitted through the Web portal will be resolved within 11 business days of receipt of the dispute, including any required supporting documentation, as per section 1862(b)(2)(B)(vii)(IV) of the Act.

After disputes have been fully resolved, the beneficiary, or his or her attorney or other representative, may download or otherwise request a time and date stamped final conditional payment summary statement through the Web portal. This statement will constitute the final conditional payment amount if settlement is reached within 3 days of the date on the conditional payment summary statement. If the beneficiary or his or her attorney is approaching settlement and any disputes have not been fully resolved, he or she may not download or otherwise request a final conditional payment summary statement until the dispute has been resolved.

It is important to note that, per section 1862(b)(2)(B)(vii)(IV) of the Act, this dispute process is not an appeals process, nor does it establish a right of appeal regarding that dispute. There will be no administrative or judicial review related to this dispute process. However, the beneficiary will maintain his or her appeal rights regarding CMS’ MSP recovery determination, once CMS issues its final demand. Those appeal rights are explained in the final demand letter issued by CMS, and more information may be found in 42 CFR 405, subpart I.

The beneficiary or his or her attorney or other representative may obtain the recovery demand letter by submitting settlement information specified by the Secretary through the Web portal in 30 days or less from date of settlement. The amount and type of settlement information required will be the same information that CMS typically collects to calculate its recovery demand amount. This information will include, but is not limited to: The date of settlement, the total settlement amount, the attorney fee amount or percentage, and additional costs borne by the beneficiary to obtain his or her settlement. This information must be provided within 30 days or less of the date of settlement. Otherwise, the final conditional payment amount obtained through the Web portal will expire and any additional conditional payments with dates of service through and including the date of settlement will be included in the recovery demand letter. Once settlement information is received, we will apply a pro rata reduction to the final conditional payment amount in accordance with 42 CFR 411.37 and issue a MSP recovery demand letter. We expect to incorporate a method into the Web portal that will allow settlement information to be entered directly through the Web portal and/or uploaded directly through the Web portal.

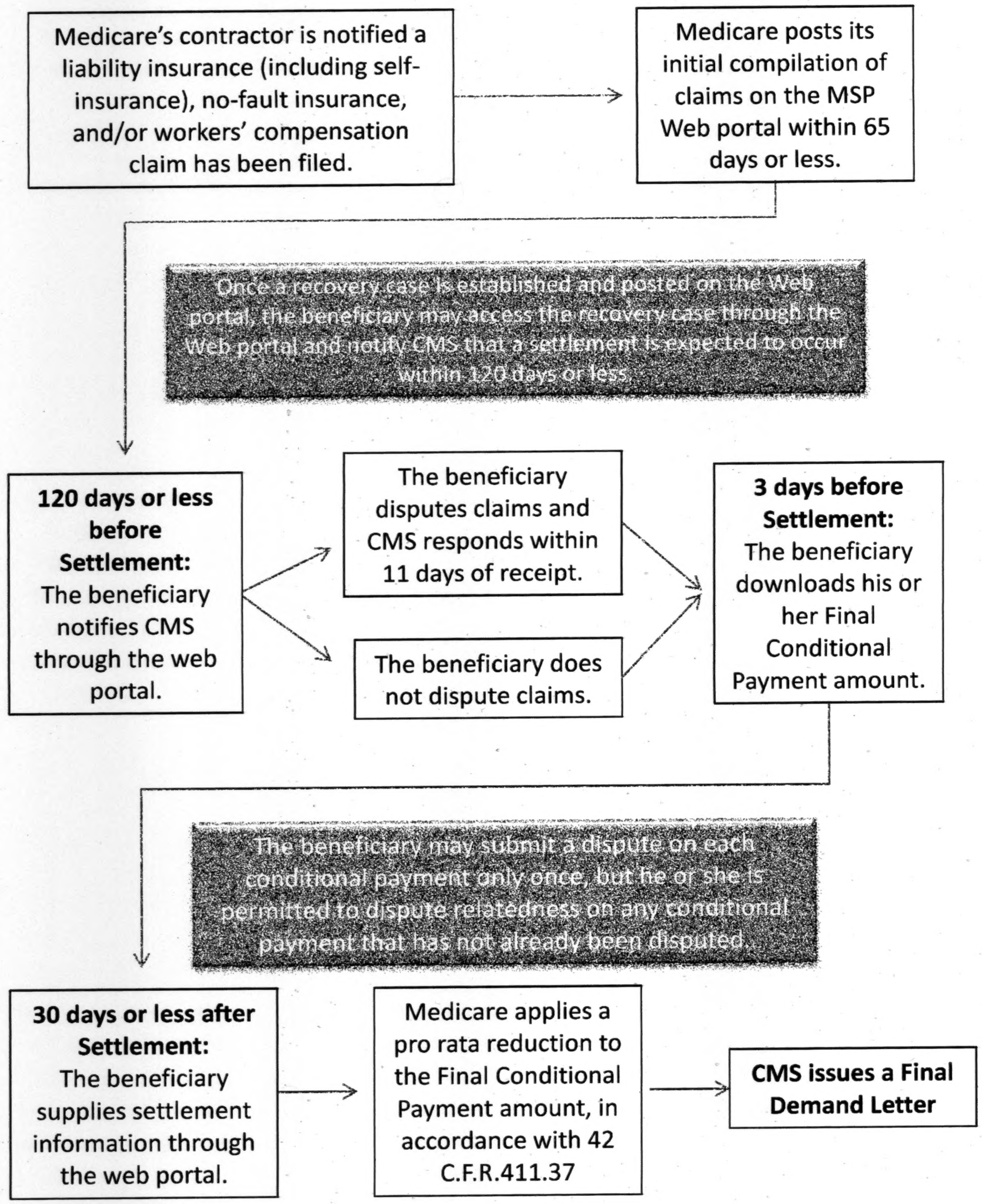
If the underlying liability insurance (including self-insurance), no-fault insurance, or workers’ compensation claim derives from alleged exposure to a toxic substance or environmental hazard, ingestion of pharmaceutical drug or other product or substance, or implantation of a medical device, joint replacement or something similar, the beneficiary or his or her attorney or other representative must provide notice to the CMS contractor via the Web portal before beginning the process to obtain a final conditional payment summary statement and amount through the Web portal. Many of these types of recovery cases require additional manual filtering and review to ensure that the claims included in the payment summary statement are related to the pending settlement.

An applicable plan may only obtain a final conditional payment amount related to a pending liability insurance (including self-insurance), no-fault insurance, or workers’ compensation settlement, in the form and manner described in 42 CFR 411.39(c), if the applicable plan has properly registered to use the Web portal and has obtained from the beneficiary, and submitted to the appropriate Medicare contractor, proper proof of representation. The applicable plan may obtain read only access if the applicable plan obtains from the beneficiary proper consent to release and submits it to the appropriate Medicare contractor.

The final conditional payment amount obtained via the Web portal represents Medicare covered and otherwise reimbursable items and services that are related to the beneficiary’s settlement and that are furnished prior to the time and date stamped on the final conditional payment summary statement. Systems and process changes to provide final conditional payment summary statements and amounts via the Web portal were implemented on January 1, 2016.

BILLING CODE 4120–01–P

DIAGRAM 1


Medicare's contractor is notified a liability insurance (including self-insurance), no-fault insurance, and/or workers' compensation claim has been filed.
Medicare posts its initial compilation of claims on the MSP Web portal within 65 days or less.
Once a recovery case is established and posted on the Web portal, the beneficiary may access the recovery case through the Web portal and notify CMS that a settlement is expected to occur within 120 days or less.
120 days or less before Settlement: The beneficiary notifies CMS through the web portal.
The beneficiary disputes claims and CMS responds within 11 days of receipt.
The beneficiary does not dispute claims.
3 days before Settlement: The beneficiary downloads his or her Final Conditional Payment amount.
The beneficiary may submit a dispute on each conditional payment only once, but he or she is permitted to dispute relatedness on any conditional payment that has not already been disputed.
30 days or less after Settlement: The beneficiary supplies settlement information through the web portal.
Medicare applies a pro rata reduction to the Final Conditional Payment amount, in accordance with 42 C.F.R.411.37
CMS issues a Final Demand Letter

BILLING CODE 4120–01–C

Comment: Many commenters requested clarity on what it means to dispute a claim "once and only once."

Response: We have clarified the language in the final rule to reflect that a claim, meaning an individual conditional payment amount, or line item, on a payment summary statement, may be disputed once and only once. An individual or entity may submit disputes more than once, but never for the same conditional payment or line item.

Comment: Many commenters requested clarity on what it means to provide initial notice and why notice about the impending settlement must be supplied separately.

Response: In order for us to establish an MSP recovery case and initiate claims compilation in our system, we must know that there is a pending insurance or workers' compensation claim. This means that a beneficiary, his or her attorney or other representative, or the insurer or workers' compensation entity must call or write to us. This type of notice does not necessarily mean that the reported insurance or workers' compensation claim is 120 days (or less) from settlement. If the insurance or workers' compensation claim is, in fact, 120 days or less from settlement, that notice may be provided through the Web portal, once a recovery case has been posted on the Web portal.

Comment: Many commenters requested clarification regarding whether Medicare continues to make conditional payments after the initial claims compilation is complete, how the claims refresh interacts with the dispute process, and whether the concept of the claims refresh is consistent with what the SMART Act requires.

Response: Medicare pays conditionally up through and including the date of settlement. In this final rule, we have removed the claims refresh requirement.

Comment: Many commenters requested that we remove the limitation that an anticipated settlement may be reported to CMS once and only once, via the Web portal, after we have completed the initial claims compilation.

Response: We recognize that it can often be difficult to project exactly when a settlement will occur. However, the SMART Act imposed workload timeframes on CMS related to the processing of cases that expect to settle within 120 days. Where we fail to comply with such timeframes, the SMART Act requires us to relinquish certain rights related to recovery. As a result, we have developed the "once and only once" requirement to encourage conscious decision-making by identified debtors and to promote our ability to provide timely and responsive service.

Comment: Many commenters requested clarification regarding the timeframe in which settlement information must be provided and specifically requested that CMS utilize a 90-day timeframe, rather than a 30-day timeframe. A few commenters requested that the 30-day timeframe remain optional because this timeframe is not in the SMART Act. They further asserted that there is no need for such a timeframe because many beneficiaries do not have attorneys, thereby negating the need to apply a pro rata reduction.

Response: In this final rule, we clarify that settlement information must be submitted within no more than 30 days of reaching settlement in order for CMS to remain bound by any final conditional payment amount it provided through the Web portal.

We recognize that the intent of the final conditional payment process is to expedite Medicare reimbursement and promote timely settlement. However, we are required to apply a pro rata reduction, in accordance with to 42 CFR 411.37, to account for attorney fees and costs borne by the beneficiary to obtain his or her settlement. In order to comply with this regulatory requirement and comport with the aforementioned intent of the final conditional payment process, we have imposed a requirement that settlement information must be submitted within no more than 30 days of reaching settlement.

Comment: Many commenters expressed concern that being required to reach a settlement within 3 days of obtaining a final conditional payment amount is not a reasonable timeframe.

Response: The SMART Act specifically established this 3-day timeframe. As a result, we maintain this requirement in this final rule. If settlement is not reached within 3 days of obtaining the final conditional payment amount, we are not bound by the final conditional payment amount. This means that, once settlement information is submitted, we will review any conditional payments it made for dates of service up through and including the date of settlement and issue our demand letter.

Comment: Many commenters raised concerns regarding the IFC's reference to future medical obligations.

Response: We recognize that the SMART Act did not specifically reference future medical care, but medical care related to the insurance or workers' compensation claim may continue to be provided after the date of settlement. As a result, we have retained the language referencing future medical items and services.

E. Discussion of Additional Comments by Public Comment Topic

1. Publication of an IFC Versus a Proposed Rule

Comment: Many commenters requested that CMS retract the IFC and issue a proposed rule before finalizing a rule related to the MSP Web portal.

Response: Section 201of the SMART Act imposed an obligation on the Secretary to promulgate final regulations not later than 9 months after the date of the enactment of this clause. In order to promulgate a final rule in such a short timeframe, we were required to forego the more traditional rulemaking process, which would have resulted in significant delay, and publish an IFC that simply reflected the addition of key process components that the SMART Act requires CMS to include in existing recovery program.

2. Timeframes of the IFC

Comment: Many commenters questioned whether certain timeframes stipulated in the IFC comported with the requirements in the SMART Act.

Response: We recognize that there is some confusion regarding the 65-day Secretarial response timeframe and 120-day protected period. We have clarified the language in this final rule to establish that a final conditional payment amount may be requested at any time after a recovery case has been posted on the Web portal. Additionally, there is no requirement that 120 days must elapse before a final conditional payment amount may be requested.

Comment: Many commenters raised concerns that beneficiaries will be unable to meet timeframes specified in the IFC because they do not have or use computers or because they do not access the Internet.

Response: We understand these concerns, but pursuing a final conditional payment amount before settlement is not required. Information will be available on the Web portal, regardless of whether the Final conditional Payment process is used. Further, the existing process that CMS' contractor uses to provide conditional payment information and demand letters via mail will continue to be available.

III. Provisions of the Final Regulations

After consideration of all of the comments received, we are finalizing the provisions included in the September 2013 IFC (78 FR 57800) with the following modifications to § 411.39:

- Paragraph (a), we are removing the definition of "Medicare Secondary Payer conditional payment information" to avoid redundancy and confusion.
- Paragraph (b), we removed language related to Web portal functionality before January 1, 2016.
- Paragraph (c)(1)(iii), we removed the claims refresh requirement.
- Paragraphs (c)(1)(iv) and (v), we revised the language to clarify that a claim, meaning an individual conditional payment amount, or line item, on a payment summary statement, may be disputed once and only once. An individual or entity may submit disputes more than once, but never for the same conditional payment or line item.
- Paragraph (c)(1)(viii), we revised the language to clarify that settlement information must be submitted within no more than 30 days of reaching settlement in order for CMS to remain bound by any final conditional payment amount it provided through the Web portal.
- Paragraph (c)(2), we revised the language to clarify that a final conditional payment amount may be requested at any time after a recovery case has been posted on the Web portal.

IV. Collection of Information Requirements

This document does not impose information collection and recordkeeping requirements. Consequently, it need not be reviewed by the Office of Management and Budget under the authority of the Paperwork Reduction Act of 1995.

V. Regulatory Impact Statement

We have examined the impact of this rule as required by Executive Order 12866 on Regulatory Planning and Review (September 30, 1993), Executive Order 13563 on Improving Regulation and Regulatory Review (February 2, 2011), the Regulatory Flexibility Act (RFA) (September 19, 1980, Pub. L. 96–354), section 1102(b) of the Social Security Act, section 202 of the Unfunded Mandates Reform Act of 1995 (March 22, 1995; Pub. L. 104–4), Executive Order 13132 on Federalism (August 4, 1999) and the Congressional Review Act (5 U.S.C. 804(2)). Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). A regulatory impact analysis (RIA) must be prepared for major rules with economically significant effects ($100 million or more in any 1 year). We have determined that the effect of this final rule on the economy and the Medicare program is not economically significant, since it imposes certain requirements on the Agency to merely improve its current mechanism for providing conditional payment information to beneficiaries, their attorneys or other representatives, and authorized applicable plans.

The RFA requires agencies to analyze options for regulatory relief of small entities. For purposes of the RFA, small entities include small businesses, nonprofit organizations, and small governmental jurisdictions. Most hospitals and most other providers and suppliers are small entities, either by nonprofit status or by having revenues of less than $7.5 million to less than $38.5 million in any 1 year. Individuals and states are not included in the definition of a small entity. We have determined that this final rule will not have a significant economic impact on a substantial number of small entities because there is and will be no change in the administration of the MSP provisions. Therefore, we are not preparing an analysis for the RFA.

In addition, section 1102(b) of the Act requires us to prepare an RIA if a rule may have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 604 for proposed rules of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of a Metropolitan Statistical Area for Medicare payment regulations and has fewer than 100 beds. We have determined that this final rule will not have a significant effect on the operations of a substantial number of small rural hospitals because there is and would be no change in the administration of the MSP provisions. Therefore, we are not preparing an analysis for section 1102(b) of the Act.

Section 202 of the Unfunded Mandates Reform Act of 1995 also requires that agencies assess anticipated costs and benefits before issuing any rule whose mandates require spending in any 1 year of $100 million in 1995 dollars, updated annually for inflation. In 2015, that threshold is approximately $146 million. This final rule has no consequential effect on state, local, or tribal governments or on the private sector because there is and will be no change in the administration of the MSP provisions.

Executive Order 13132 establishes certain requirements that an agency must meet when it promulgates a proposed rule (and subsequent final rule) that imposes substantial direct requirement costs on state and local governments, preempts state law, or otherwise has Federalism implications. Since this final rule does not impose any costs on state or local governments, the requirements of Executive Order 13132 are not applicable. In accordance with the provisions of Executive Order 12866, this final rule was not reviewed by the Office of Management and Budget.

List of Subjects in 42 CFR Part 411

Kidney diseases, Medicare, Physician referral, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, the Centers for Medicare & Medicaid Services adopts as final, the interim rule amending 42 CFR part 411 which was published on September 20, 2013 (78 FR 57800) with the following changes:

PART 411—EXCLUSIONS FROM MEDICARE AND LIMITATIONS ON MEDICARE PAYMENT

■ 1. The authority citation for part 411 continues to read as follows:

Authority: Secs. 1102, 1860D–1 through 1860D–42, 1871, and 1877 of the Social Security Act (42 U.S.C. 1302, 1395w–101 through 1395w–152, 1395hh, and 1395nn).

■ 2. Amend § 411.39 by:
■ A. In paragraph (a) removing the definition of "Medicare Secondary Payer conditional payment information".
■ B. Revising paragraph (b)(1)(ii).
■ C. Removing paragraph (b)(2).
■ D. Redesignating paragraph (b)(3) as (b)(2).
■ E. Revising newly redesignated paragraph (b)(2).
■ F. Revising paragraph (c).

The revisions read as follows:

§ 411.39 Automobile and liability insurance (including self-insurance), no-fault insurance, and workers' compensation: Final conditional payment amounts via Web portal.

* * * * *

(b) * * *

(1) * * *

(ii) The appropriate Medicare contractor has received initial notice of a pending liability insurance (including self-insurance), no-fault insurance, or workers' compensation settlement, judgment, award, or other payment and has posted the recovery case on the Web portal.

(2) *Beneficiary's attorney or other representative or applicable plan's*

access using the multifactor authentication process. A beneficiary's attorney or other representative or an applicable plan may do the following:

(i) Access conditional payment information via the MSP Recovery Portal (Web portal).

(ii) Dispute claims.

(iii) Upload settlement information via the Web portal using multifactor authentication.

* * * * *

(c) *Obtaining a final conditional payment amount.* (1) A beneficiary, or his or her attorney or other representative, or an authorized applicable plan, may obtain a final conditional payment amount related to a pending liability insurance (including self-insurance), no-fault insurance, or workers' compensation settlement, judgment, award, or other payment using the following process:

(i) The beneficiary, his or her attorney or other representative, or an applicable plan, provides initial notice of a pending liability insurance (including self-insurance), no-fault insurance, and workers' compensation settlement, judgment, award, or other payment to the appropriate Medicare contractor before accessing information via the Web portal.

(ii) The Medicare contractor compiles claims for which Medicare has paid conditionally that are related to the pending settlement, judgment, award, or other payment within 65 days or less of receiving the initial notice of the pending settlement, judgment, award, or other payment and posts a recovery case on the Web portal.

(iii) If the underlying liability insurance (including self-insurance), no-fault insurance, or workers' compensation claim derives from one of the following, the beneficiary, or his or her attorney or other representative, must provide notice to CMS' contractor via the Web portal in order to obtain a final conditional payment summary statement and amount through the Web portal:

(A) Alleged exposure to a toxic substance.

(B) Environmental hazard.

(C) Ingestion of pharmaceutical drug or other product or substance.

(D) Implantation of a medical device, joint replacement, or something similar.

(iv) Up to 120 days before the anticipated date of a settlement, judgment, award, or other payment, the beneficiary, or his or her attorney, other representative, or authorized applicable plan may notify CMS, once and only once, via the Web portal, that a settlement, judgment, award or other payment is expected to occur within 120 days or less from the date of notification.

(A) CMS may extend its response timeframe by an additional 30 days when it determines that additional time is required to address claims that Medicare has paid conditionally that are related to the settlement, judgment, award, or other payment in situations including, but not limited to, the following:

(*1*) A recovery case that requires manual filtering to ensure that associated claims are related to the pending settlement, judgment, award, or other payment.

(*2*) Internal CMS systems failures not otherwise considered caused by exceptional circumstances.

(B) In exceptional circumstances, CMS may further extend its response timeframe by the number of days required to address the issue that resulted from such exceptional circumstances. Exceptional circumstances include, but are not limited to the following:

(*1*) Systems failure(s) due to consequences of extreme adverse weather (loss of power, flooding, etc.).

(*2*) Security breaches of facilities or network(s).

(*3*) Terror threats; strikes and similar labor actions.

(*4*) Civil unrest, uprising, or riot.

(*5*) Destruction of business property (as by fire, etc.).

(*6*) Sabotage.

(*7*) Workplace attack on personnel.

(*8*) Similar circumstances beyond the ordinary control of government, private sector officers or management.

(v) The beneficiary, or his or her attorney, or other representative may then address discrepancies by disputing individual conditional payments, once and only once, if he or she believes that the conditional payment included in the most up-to-date conditional payment summary statement is unrelated to the pending liability insurance (including self-insurance), no-fault insurance, or workers' compensation settlement, judgment, award, or other payment.

(A) The dispute process is not an appeals process, nor does it establish a right of appeal regarding that dispute. There will be no administrative or judicial review related to this dispute process.

(B) The beneficiary, or his or her attorney or other representative may be required to submit supporting documentation in the form and manner specified by the Secretary to support his or her dispute.

(vi) Disputes submitted through the Web portal and after the beneficiary, or his or her attorney, other representative, or authorized applicable plan has notified CMS that he or she is 120 days or less from the anticipated date of a settlement, judgment, award, or other payment, are resolved within 11 business days of receipt of the dispute and any required supporting documentation.

(vii) When any disputes have been fully resolved, the beneficiary, or his or her attorney or other representative, may download or otherwise request a time and date stamped conditional payment summary statement through the Web portal.

(A) If the download or request is within 3 days of the date of settlement, judgment, award, or other payment, that conditional payment summary statement will constitute Medicare's final conditional payment amount.

(B) If the beneficiary, or his or her attorney or other representative, is within 3 days of the date of settlement, judgment, award, or other payment and any claim disputes have not been fully resolved, he or she may not download or otherwise request a final conditional payment summary statement.

(viii) Within 30 days or less of securing a settlement, judgment, award, or other payment, the beneficiary, or his or her attorney or other representative, must submit through the Web portal documentation specified by the Secretary, including, but not limited to the following:

(A) The date of settlement, judgment, award, or other payment, including the total settlement amount, the attorney fee amount or percentage.

(B) Additional costs borne by the beneficiary to obtain his or her settlement, judgment, award, or other payment.

(*1*) If settlement information is not provided within 30 days or less of securing the settlement, the final conditional payment amount obtained through the Web portal is void.

(*2*) [Reserved]

(ix) Once settlement, judgment, award, or other payment information is received, CMS applies a pro rata reduction to the final conditional payment amount in accordance with § 411.37 and issues a final MSP recovery demand letter.

(2) An applicable plan may only obtain a final conditional payment amount related to a pending liability insurance (including self-insurance), no-fault insurance, or workers' compensation settlement, judgment, award, or other payment in the form and manner described in § 411.38(b) if the applicable plan has properly registered to use the Web portal and has obtained

from the beneficiary, and submitted to the appropriate CMS contractor, proper proof of representation. The applicable plan may obtain read only access if the applicable plan obtains from the beneficiary, and submits to the appropriate CMS contractor, proper consent to release.

* * * * *

Dated: April 25, 2016.

Andrew M. Slavitt,

Acting Administrator, Centers for Medicare & Medicaid Services.

Dated: April 29, 2016.

Sylvia M. Burwell,

Secretary, Department of Health and Human Services.

[FR Doc. 2016–11270 Filed 5–13–16; 11:15 am]

BILLING CODE 4120–01–P

Proposed Rules

Federal Register
Vol. 81, No. 95
Tuesday, May 17, 2016

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

24 CFR Part 200

[Docket No. FR–5850–N–03]

RIN 2502–AJ28

Retrospective Review—Improving the Previous Participation Reviews of Prospective Multifamily Housing and Healthcare Programs Participants; Supplemental Notice of Proposed Rulemaking

AGENCY: Office of the Assistant Secretary for Housing, HUD.

ACTION: Supplemental notice of proposed rulemaking.

SUMMARY: On August 10, 2015, HUD published in the **Federal Register**, a proposed rule that would revise HUD's regulations for reviewing the previous participation of Federal programs of certain participants seeking to take part in multifamily housing and healthcare programs administered by HUD's Office of Housing. Specifically, the rulemaking proposed to clarify and simplify the process by which HUD reviews the previous participation of participants that have decision-making authority over their projects as one component of HUD's responsibility to assess financial and operational risk to the projects in these programs. The approach offered by the proposed rule was to not only bring greater certainty and clarity to the process but greater flexibility, avoiding a one-size fits all approach.

This document opens the public comment period solely for the provisions addressed in this document to address concerns that while the proposed rule provided greater flexibility, it lacked the greater certainty to which HUD committed, and how HUD would provide such certainty.

DATES: *Comment Due Date:* June 16, 2016.

ADDRESSES: Interested persons are invited to submit comments regarding this notice to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street SW., Room 10276, Washington, DC 20410–0500. Communications must refer to the above docket number and title. There are two methods for submitting public comments. All submissions must refer to the above docket number and title.

1. *Submission of Comments by Mail.* Comments may be submitted by mail to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street SW., Room 10276, Washington, DC 20410–0001.

2. *Electronic Submission of Comments.* Interested persons may submit comments electronically through the Federal eRulemaking Portal at *www.regulations.gov.* HUD strongly encourages commenters to submit comments electronically. Electronic submission of comments allows the commenter maximum time to prepare and submit a comment, ensures timely receipt by HUD, and enables HUD to make them immediately available to the public. Comments submitted electronically through the *www.regulations.gov* Web site can be viewed by other commenters and interested members of the public. Commenters should follow the instructions provided on that site to submit comments electronically.

Note: To receive consideration as public comments, comments must be submitted through one of the two methods specified above. Again, all submissions must refer to the docket number and title of the document.

No Facsimile Comments. Facsimile (FAX) comments are not acceptable.

Public Inspection of Public Comments. All properly submitted comments and communications submitted to HUD will be available for public inspection and copying between 8 a.m. and 5 p.m. weekdays at the above address. Due to security measures at the HUD Headquarters building, an advance appointment to review the public comments must be scheduled by calling the Regulations Division at 202–708–3055 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number via TTY by calling the toll-free Federal Relay Service at 800–877–8339. Copies of all comments submitted are available for inspection and downloading at *www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Aaron Hutchinson, Office of Housing, Department of Housing and Urban Development, 451 7th Street SW., Room 6178, Washington, DC 20410; telephone number 202–708–3994 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number through TTY by calling the toll-free Federal Relay Service at 800–877–8339 (this is not a toll-free number).

SUPPLEMENTARY INFORMATION:

I. Background

On August 10, 2015, at 80 FR 47874, HUD published a document that proposed to amend its regulations, at 24 CFR part 200, subpart H, that govern the process by which HUD reviews the previous participation and performance of applicants seeking to participate in HUD's multifamily and healthcare programs. Currently, all principals seeking to participate in HUD's multifamily housing and healthcare programs must certify that all principals involved in a proposed project have acted responsibly and have honored their legal, financial, and contractual obligations in their previous participation in HUD programs, in certain programs administered by the U.S. Department of Agriculture, and in projects assisted or insured by state and local government housing finance agencies. HUD's regulations require applicants to complete a very detailed and lengthy certification form (HUD Form 2530)[1] of participants that have decision-making authority over their projects as one component of HUD's responsibility to assess financial and operational risk to the projects in these programs.

The August 10, 2015, proposed rule proposed to clarify which individuals and entities will be reviewed, the purpose of the review, and the review to be undertaken. HUD proposed by targeting more closely the individuals and actions that would be subject to prior participation review, HUD would not only bring greater certainty and clarity to the process but would provide HUD with flexibility as to the necessary previous participation review for entities and individuals that is not possible in a one-size fits all approach.

The public comment period on the proposed rule closed on October 9,

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[1] See *http://portal.hud.gov/hudportal/documents/huddoc?id=2530.pdf.*

2015, and HUD received 33 sets of public comments. The commenters were from real estate organizations, affordable housing nonprofit organizations, consulting firms, non-profit organizations, and law firms. Overall the commenters were very supportive and appreciative of HUD's efforts to reform the regulations. Commenters stated that, in addition to reforms to the regulations, reforms to the review process, additional guidance and training materials were also needed.

Several comments expressed concern that the proposed regulations were overly broad and therefore would be open to various interpretations, which would complicate the review process for applicants and participants rather than simplify the process. The commenters suggested that in order to obtain flexibility in the review process, which the commenters supported, the approach in the proposed rule sacrificed specificity and certainty. Commenters suggested that HUD revise the proposed regulations to provide the greater certainty and specificity they need. Other commenters suggested that HUD issue guidance when HUD issues the final regulations to provide the specificity and certainty that the proposed regulations lack according to the commenters.

II. Proposed Approach To Provide Certainty and Specificity and Retain Flexibility

Through this document, HUD proposes to use an approach that HUD has taken in certain of its other regulations and that is to provide regulations that clearly document the regulatory requirements imposed, but provide in a supplemental document, a document referenced in the regulations, that will address the specific procedures to be followed.[2] When HUD has taken this approach, HUD commits to provide notice and opportunity for comment for any significant changes made to the document. HUD submits that this approach is particularly suitable for the 2530 process.

For the previous participation review process, HUD proposes to issue with its final regulations a "Processing Guide for Previous Participation Reviews of Prospective Multifamily Housing and Healthcare Programs' Participants" (Guide). This Guide, which will be posted on HUD's Web site, will provide the details on procedures which commenters are seeking and which HUD submits is more appropriate for a process guide than for regulatory text. The Guide will provide applicants for and participants in HUD's multifamily housing and healthcare programs the detailed information desired on the previous participation review process, and provide HUD with the ability to make changes as may be needed to address specific circumstances that may arise in the previous participation process and to keep up-to-date with changes that may arise in the housing market. One of the longstanding complaints about HUD's previous participation review process is that the process and the regulations that govern the process are very outdated and do not keep up with the times. HUD submits that a lean set of regulations supplemented by a detailed processing Guide that is subject to notice and comment for any significant changes is the best approach for this process and one that will endure successfully for some time. The appendix to this document provides the proposed Guide for which HUD is seeking public comment for a period of 30 days. The Guide, in addition to elaborating upon terms and provisions in the proposed rule, also addresses "flags," which are not addressed in either the existing regulations or proposed regulations. Flags refer to an issue or issues in a prospective participant's application for which further review is necessary. The Guide also includes certain information collection requirements but those requirements are ones which are already included in HUD's 2530 form and which already have an approval number assigned by the Office of Management and Budget under the Paperwork Reduction Act. For example, the Guide requires organizational information to be presented in an organizational chart instead of merely listed. However, the Guide makes clear that not every entity identified in the organizational chart will be considered a Controlling Participant, as defined in the regulation.

In addition to publication in the **Federal Register**, this document and Guide can be found at *http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh.*

III. Description of Proposed Revisions to Regulations

In addition to issuance of the proposed Guide for comment, HUD also seeks comment on the following additional provisions that are proposed to be included or revised in the regulation.

A. Inclusion of Applicability of Processing Guide in Regulations

HUD proposes to revise § 200.210 (Policy) to clarify that it is HUD's policy, in accordance with the intent of the National Housing Act, and with other applicable federal statutes, participants in HUD's housing and healthcare programs be responsible individuals and organizations who will honor their legal, financial and contractual obligations. HUD would further clarify that it will review the prior participation of Controlling Participants, as defined in the August 10, 2015, proposed rule, as a prerequisite to participation in HUD's multifamily housing and healthcare programs listed in § 200.214.

HUD would further revise the policy language in § 200.210 to advise that the regulations in 24 CFR part 200, subpart H, as proposed to be amended by the August 10, 2015, proposed rule would be supplemented by the Processing Guide for Previous Participation Reviews of Prospective Multifamily Housing and Healthcare Programs' Participants (Guide), which would be made available on HUD's Web site at *www.hud.gov.* HUD would advise that the Guide elaborates on the basic procedures involved in the previous participation review process. HUD would also advise that for any significant changes made to the Guide, HUD would provide advance notice and the opportunity to comment, providing a comment period of no less than 30 days.

B. Description of Definition of "Risk"

In § 200.212, the Definition section, HUD proposes to include a definition of "Risk." While § 200.220 of the proposed rule addresses "risk," HUD is proposing to add a definition of this term that would clarify that in order to determine whether a Controlling Participant's participation in a project would constitute an unacceptable risk, HUD's FHA Commissioner must determine whether the Controlling Participant could be expected to participate in the Covered Project (as defined in the August 10, 2015, proposed rule) in a manner consistent with furthering HUD's purpose of supporting and providing decent, safe and affordable housing for the public. The Commissioner's review of Previous Participation shall consider compliance with applicable statutes, regulations and program requirements. HUD would clarify that the FHA Commissioner must consider the Controlling Participant's previous financial and operational performance in HUD programs that may indicate a financial or operating risk in approving the Controlling Participant's participation in the subject Triggering Event. HUD would further provide that at the FHA Commissioner's discretion, as necessary to determine financial or operating risk and to the extent the FHA Commissioner determines such information to be reliably available, the FHA Commissioner may consider the Controlling Participant's participation and performance in any federal, state or local government program. In addition, HUD would provide that the FHA Commissioner may exclude any previous participation the FHA Commissioner determines to be irrelevant in evaluating risk and/or any previous participation in which the Controlling Participant did not exercise, actually or constructively, control. Finally, the definition would provide that any information collection in connection with review of previous participation must follow all applicable requirements for information collection.

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[2] See 24 CFR 207.254, pertaining to mortgage insurance premiums; 24 CFR 203.605, pertaining to tier ranking systems and methodology applicable to loss mitigation performance; 24 CFR 290.9, pertaining to setting rental rates for certain multifamily housing projects; 24 CFR 570.712(b) pertaining to setting a fee for the Section 108 Loan Guarantee Program; and 24 CFR part 902, pertaining to scoring notices for HUD's Public Housing Assessment System.

Dated: May 9, 2016.

Edward L. Golding,

Principal Deputy Assistant Secretary for Housing.

Appendix

Processing Guide for Previous Participation Reviews of Prospective Multifamily Housing and Healthcare Programs' Participants

Purpose

This Processing Guide (Guide) supplements HUD's Previous Participation Review regulations in 24 CFR part 200, subpart H. The Guide defines controlling participants for previous participation review, new flag approval, and rejection guidance and flag protocols in federal programs of certain participants seeking to take part in multifamily housing and healthcare programs administered by HUD's Office of Housing. The Guide aids in clarifying and simplifying the process by which HUD reviews previous participation of participants that have decision making authority over their projects as one component of HUD's responsibility to assess financial and operational risk to projects in these programs.

This Guide updates and clarifies previous procedures and supersedes outstanding policy and guidance concerning previous participation review found in the following: Multifamily Accelerated Processing (MAP) Guide Handbook 4430.G, Multifamily Asset Management and Project Servicing Handbook 4350.1, Healthcare Mortgage Insurance Program Handbook 4232.1, and Mortgage Insurance for Hospitals 4615.1. HUD will incorporate elements of this Guide into these handbooks. In addition, the Guide supersedes the Previous Participation (HUD–2530) Handbook 4065.1.

Applicability of the Previous Participation Review

This Guide applies to Covered Projects administered by the Office of Multifamily Housing, the Office of Grant Administration and the Office of Healthcare Programs, as listed in HUD's regulations in 24 CFR part 200 subpart H.

The Covered Projects are those that are insured under the following sections of the National Housing Act: Sections 213, 220, 231, 223(d), 221(d)(4), 241(a), 223(f), 232/223(f), 242/223(f), 223(a)(7), 232, 232(i), 242, 542(b) and 542(c).

The Guide also applies to non-insured projects that include Section 202 or Section 811 Capital Advances or Direct Loans, Section 236 loans, or Subsidized Projects in which 20 percent or more of the units now receive or will receive a subsidy in the form of:

- Interest reduction payments under section 236 of the National Housing Act (12 U.S.C. 1715z–1);
- Rental Assistance Payments under section 236 of the National Housing Act (12 U.S.C. 1715z–1); Rent Supplement payments under section 101 of the Housing and Urban Development Act of 1965 (12 U.S.C. 1701s); or
- Project based rental assistance pursuant to housing assistance payment contracts under Section 8 of the Housing Act of 1937 (but not including project-based assistance provided under the Housing Choice Voucher program administered by HUD's Office of Public and Indian Housing).

For the Sections 223(a)(7), 223(f), 241(a), 232(i) and 223(d) programs Controlling Participants are only subject to previous participation review if they were not previously approved to participate in that project.

Change in Controlling Participants

Any new Controlling Participant of a Covered Project requires consent by HUD.

Waiver Authority

Program offices may waive any portion of this Guide that is not regulatory subject, however, to a good cause justification as required by HUD for all waivers. HUD expects waivers to be rare and in response to unique circumstances meeting the intent of HUD's Previous Participation Review regulations.

Program Requirements

The below sections outline who is subject to a previous participation review, submission requirements, review procedures, approval and rejection processes as well as participant flagging.

A. Controlling Participants for Previous Participation Review Purposes

Previous Participation Review is required for Controlling Participants. In connection with each Triggering Event, Mortgagees in insured projects and entities serving in the Specified Capacities listed below in non-insured projects shall provide to HUD a list of all Controlling Participants. Controlling Participants are those entities and individuals (i) serving as a Specified Capacity with respect to a Covered Project and (ii) the entities and individuals in control of the Specified Capacities. At least one natural person must be identified as a Controlling Participant for each Specified Capacity. The chart below shows the Specified Capacities for the listed programs.

SPECIFIED CAPACITIES

	Multifamily housing	Office of residential care facilities	Office of hospital facilities
Borrower or Owner	X	X	X
Management Agent	X	X	
Operator		X	X
General Contractor	X	X	X
Construction Manager			X
Master Tenant/Landlord		X	

Controlling Participants. The entities serving as a Specified Capacity are Controlling Participants of the Covered Project for the programs listed. In addition, the individuals and entities determined by HUD to exercise financial or operational control over these entities are also Controlling Participants. Controlling Participants require Previous Participation Review and must complete Previous Participation Review submissions. Any individual or entity who exercises financial or operational control of a Specified Capacity is considered to be a Controlling Participant and required to complete a Previous Participation Review submission, unless excluded below. Controlling Participants include both entities and natural persons. If a Controlling Participant is an entity, the submission must include the people who exercise the day-to-day control for that entity.

Notwithstanding the foregoing or anything else in this Guide, if HUD determines that an individual or entity does not actually exercise financial or operational control of a Covered Project or Specified Capacity, such individual or entity shall not be considered a Controlling Participant.

List of Controlling Participants: For purposes of Previous Participation Review, unless excluded below or otherwise determined by HUD not to be a Controlling Participant, the following shall be considered Controlling Participants:

1. Entities and individuals owning, directly or indirectly, 25% or more of a Specified Capacity.
2. Any officers and other executive management (including Executive Director and other similar capacities) of the Specified Capacity.
3. The controlling owners (entities and/or individuals) of the entity that controls the Specified Capacity.
4. Managers or managing members of Limited Liability Companies (LLCs).
5. General partners of limited partnerships, including "administrative" general partners or other general partners if they exercise day-to-day control over the entity.
6. Partners in a general partnership.
7. Executive Director (or equivalent position) of a non-profit sponsor of a Specified Capacity.
8. With respect to non-profit Borrowers under the Section 242 program, the executive management of the Borrower and the members of the Board of Directors that HUD determines have control over the finances or operation of the hospital.
9. Officers of a for-profit corporation's Board of Directors.
10. Controlling stockholders of a corporation.
11. Trustees of a trust.
12. For real estate investment trusts (REITs), the REIT itself, the chief executive officer (or equivalent position) and all company officers (except those officers determined by HUD not to exercise day-to-day control over the REIT, the Specified Capacity or the Covered Project) must file.
13. For insured projects, if applicable, the person (people) and/or entity (entities) to be listed on the Regulatory Agreement Non-Recourse Debt section.
14. Any other person or entity determined by HUD to exercise day-to-day control over a Specified Capacity. This may include any officers, directors or members of an executive management team (even of excluded entities) who would otherwise not be required to make a submission if they are exercising control over the Specified Capacity.

If the applicant or Mortgagee has any reason to believe that any Controlling Participant is not of sound mind or body or is otherwise incapacitated, such information must be disclosed to HUD to review and determine whether another individual is acting as a Controlling Participant.

List of Exclusions: Except that any Specified Capacity is a Controlling Participant, and unless otherwise determined in writing by HUD in a specific transaction to exercise day-to-day control of a Covered Project or Specified Capacity, Controlling Participants do not include the following:

1. *Wholly-owned entities.* Any entity that is 100% owned or controlled by one individual or entity is excluded. Such entities are not exercising control; the individual or entity that wholly owns them is exercising control. An organizational chart may include one or more tiers of wholly-owned entities. All wholly-owned entities in all tiers are excluded.
2. *Shell entities.* Entities that do not take actions themselves but only serve as legal vehicles through which the partners, members or owners of such entity take actions are excluded. These entities are not exercising control, the partners, members or owners of such entity are controlling. The "middle tiers" of an organizational chart are often shell entities. For example, if a Borrower LLC's managing member ("MM A") is a joint venture partnership ("JV B") of two entities ("P 1" and "P 2") and that joint venture's organizational documents indicate that the day-to-day control of the joint venture is exercised by one of the two partners (P 1), then all of those entities, except P 1 is excluded. None of MM A, JV B or P 2 are Controlling Participants of the Borrower.
3. *Tax credit investors.* Syndicator and direct investor entities in Low-Income Housing Tax Credits, Historic Tax Credits, New Markets Tax Credits or other tax credits (if HUD determines such credits are substantially similar to the listed tax credits) are excluded unless such entities exercise day-to-day control or seek other involvement that would trigger the need for previous participation review. HUD may still require a so-called "LLCI certification," an "Identification and Certification of Eligible Limited Liability Investor Entities," "Passive Investor Certification" or any other such certification.
4. *Passive participants.* If an entity's organizational documents specify which members, partners or owners are authorized to exercise day-to-day control of that entity, then any other members, partners or owners who are not authorized to exercise state day-to-day control of an entity are excluded.
5. *Minor officers.* If HUD determines that an officer of a corporation or other entity does not have significant involvement in a Covered Project, such officers are excluded. If all the officers of the entity certify as to who have significant and insignificant involvement, this certification shall be evidence of the significant and insignificant involvement.
6. *Members of a Board of Directors.* Members of a non-profit or for-profit corporation's board of directors who do not exercise control over the corporation in another capacity (for example, as Executive Director or other manager or officer of the non-profit corporation) are excluded. This exclusion does not apply to the members of boards of directors of hospitals, the rule for which is specified in the Regulation and captured in #8 within the Listing of Controlling Participants above.
7. *Less than 25% ownership interest.* Unless exercising control through another capacity, members, partners, stakeholders and owners of entities with less than a 25% interest in an entity are excluded. This exclusion does not apply to any such member, partner, stakeholder or other owner of an entity ("Proposed Excluded Member") who would have an interest greater than 25% if the combined percentages of all other members, partners, stakeholders or other owners (including beneficial interests in trusts) with whom the Proposed Excluded Member has an "Identity of Interest" or other conflict of interest because of familial relation or common financial interest exceeds 25%. Whether an Identity of Interest or other conflict of interest exists is determined by HUD. If the program requirements of the applicable program in which the Covered Project is participating speak to Identify of Interest or other conflict of interest, those program requirements control.
8. *Nursing Homes and Assisted Living Facilities.* With respect to projects under the Section 232 program, the nursing home administrator of nursing homes and equivalent positions in assisted living facilities are excluded.
9. *Publicly Held Companies.* For publicly held companies, the chief executive officer (or equivalent position), the controlling shareholder (if any), and project manager(s) or other individual(s), if any, identified as must having day-to-day control over a Specified Capacity or Covered Project must file but the publicly held company shall otherwise treated as an individual without need for other individual shareholders to file certifications in their individual capacity or identify their social security or tax identification numbers.
10. *No Exercise of Financial or Operational Control.* Any individual or entity determined by HUD not to exercise financial or operational control of a Covered Project or Specified Capacity shall not be considered a Controlling Participant.

B. Organization Charts

An organization chart must be submitted for each Specified Capacity and for any entity within the organization chart if requested by HUD. Organization charts are visual representations of the ownership structure of an organization. All organization charts submitted in connection with a Triggering Event are considered part of the application for HUD review and subject to the certifications stating that the application is true and complete. The organization chart must be clear enough so that a person unfamiliar with the Covered Project and the entities involved can understand the ownership and control structure. The organization chart must include the following:

1. Clearly show all tiers of the ownership structure, including the members or owners of the entities listed.
2. Show all participants, not just those who the Lender or Applicant considers to be principals or Controlling Participants. To the extent ownership interests are identified as widely held, the Applicant must provide any information requested by HUD regarding such interests.
3. Shows percentages of ownership and role in the entity (*e.g.* Limited Partner, General Partner, Managing Member, Tax Credit Syndicator/Investor, etc.).

4. At least one natural person, and not just entities.

5. Each Specified Capacity must be shown on a separate organization chart (*e.g.* Borrower, Operator, Management Agent, Master Tenant, etc.).

6. Anyone on an organizational chart that is debarred, suspended, or is subject to a Limited Denial of Participation (LDP), a voluntary abstention or a voluntary exclusion may not participate in the Covered Project.

7. With respect to each entity on the organization chart, the executive management teams (for example, all officers such as CEO, CFO, President, Executive Director, etc., but not department heads or lower level management) and any members of a Board of Directors must be disclosed to HUD even if such individuals are not considered to be Controlling Participants and do not need to file Previous Participation Review submissions.

C. Filing the Previous Participation Certification

To fulfill the Previous Participation Review requirements, applicable controlling participants must file a Previous Participation Certification. Participants may utilize either the electronic Active Partners Performance System (APPS) *or* a paper alternative. Participants should not file both an APPS submission and a paper form. HUD strongly encourages participants to utilize the APPS system. As part of the Previous Participation Certification, participants are only required to list all projects which they have participated in over the previous 10 year period. However, HUD reserves the right to review and consider a participant's previous participation in a federal project beyond the 10 year period when determining whether to approve participation in the project associated with an application.

The following chart indicates which filing options are available for which programs.

Filing method	Multifamily housing & grant administration projects	Office of residential care facilities	Office of hospital facilities
Active Partners Performance System (APPS) Submission	X	X	X
OR			
Form HUD–2530 (paper)	X	....	X
Consolidated Certification[3] Previous Participation Section (paper)	....	X	....

ACTIVE PARTNERS PERFORMANCE SYSTEM (APPS) SUBMISSION INSTRUCTIONS

HUD has made several upgrades to the system to improve the applicant submission process. For example, HUD now allows for electronic signatures of APPS submissions, ability to upload submission packages, and has improved the baseline submission to allow for edits. HUD encourages participants to utilize the APPS system when filing the Previous Participation Certification as it saves a substantial amount of time and allows for faster review of submissions by HUD reviewers.

Here is a link to the APPS resources: *http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/apps/appsmfhm.*

For questions about the APPS system contact the Multifamily Housing Systems Help Desk by phone at (800) 767–7588 or *Apps-F24p@hud.gov.*

Step 1: System Registration	This step registers Controlling Participants in the APPS system. See the APPS Quick Tips for detailed instructions on the registration process: *http://portal.hud.gov/hudportal/documents/huddoc?id=appsquicktips.pdf.*
Step 2: Create a Baseline	This step establishes the organization structure and previous participation of Controlling Participants. See Chapter 2 of the APPS Userguide for specific instructions and screen shots: *http://portal.hud.gov/hudportal/documents/huddoc?id=chapter2.pdf.*
Step 3: Create a Property Submission.	This step creates a submission for a Controlling Participant's role in a specific project. See Chapter 3 of the APPS Userguide for specific instructions and screen shots: *http://portal.hud.gov/hudportal/documents/huddoc?id=chapter3.pdf.*
Step 4: Complete the Certification and Submit to HUD.	In this step Controlling Participants electronically certify to previous participation certifications and send the submission to HUD for review. See Chapter 7 of the APPS Userguide for specific instructions and screen shots: *http://portal.hud.gov/hudportal/documents/huddoc?id=CHAPTER7.PDF.*
Step 5: Upload the Organization Chart with the Signature Pages.	The user uploads the Organization Chart and Signature Pages into the APPS system. See Section B for a description of what the organization chart must include.

FORM HUD–2530 COMPLETION INSTRUCTIONS[4]

[It is the participant's responsibility to assure that the Form HUD–2530 is correct, complete and accurate.]

Form section	Instructions
Review certification language	The participant should assure that compliance with the certification is met. If there is a certification that a controlling participant cannot certify to, the participant must strikethrough that particular certification, initial the strikethrough and attach a signed letter of explanation. This situation should be rare.
Block 2	List Project Name and Number.
Block 7	Controlling Participants on the organization chart must match Block 7.
Blocks 8 and 9	Write "See Organization Chart."
Block 10	Insert Social Security Number or Tax ID Number for each Controlling Participant.
Bottom of Page 1	The Controlling Participants listed in Block 7 must also be listed in the signature block at the bottom of Page 1.

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[3] Consolidated Certifications are the following forms: HUD 90013–ORCF, Consolidated Certification-Borrower, HUD 90014–ORCF, Consolidated Certification-Principal of the Borrower, HUD 90015–ORCF, Consolidated Certification-Operator, HUD 90017–ORCF, Consolidated Certification-Management Agent, and HUD 90018–ORCF, Consolidated Certification-General Contractor.

FORM HUD–2530 COMPLETION INSTRUCTIONS[4]—Continued

[It is the participant's responsibility to assure that the Form HUD–2530 is correct, complete and accurate.]

Form section	Instructions
	The Controlling Participants must sign and date the submission. Authorized person(s) may sign on behalf of other person(s) or entities. It is the signer's responsibility to assure that they are authorized to sign on behalf of others. Each signature block must include a signature.
Schedule A	All principals listed in Block 7 must be listed in Column 1 Column 2 must include all previous participation from the past 10 years in: (a) Covered Projects, (b) housing projects with current flags under the U.S. Department of Agriculture's previous participation review system and (c) any other housing project participating in a federal, state or local or government program if during the Controlling Participant's participation in the housing project (i) the housing project was foreclosed upon; (ii) the housing project was transferred by a deed in lieu of foreclosure; or (iii) an event of default, or similarly termed event, was declared against the housing project or the Controlling Participant pursuant to the government program's project documents. Controlling Participants with No Previous Participation should write "No Previous Participation, First Experience." Principal roles must be included in Column 3 The Status of the Loan must be listed in Column 4. Note: This section is not applicable for General Contractors that did not have ownership interest in the project. Identify (checkbox) whether the project was ever in default during the participant's participation in Column 5. If the "yes" box is checked a detailed explanation of the circumstances (including mitigating factors) must be provided. Note: This section is not applicable for General Contractors that did not have ownership interest in the project. List the latest Management Review and Physical Inspection dates and scores in Column 6. If there are no scores, write "None." Note: This section is not applicable for General Contractors that did not have ownership interest in the project.
Business Partner Registration System (BPRS) Registration.	Each Controlling Participant must be registered in the BPRS System. Here is a link: *https://hudapps2.hud.gov/apps/part_reg/apps040.cfm*
Organization Chart	Attach an organization chart. See Section B for a description of what the organization chart must include.

CONSOLIDATED CERTIFICATION COMPLETION INSTRUCTIONS

[It is the participant's responsibility to assure that the Consolidated Certification is correct, complete and accurate.]

Form Section	Instructions
Review certification language in the Consolidated Certification[5].	The participant should assure that compliance with the certification is met.
Attachment 1	Participants with Previous Participation must complete Attachment 1 of the Consolidated Certification for projects participated in over the past 10 years. Include all previous participation from the past 10 years in: (a) Covered Projects, (b) housing projects with current flags under the U.S. Department of Agriculture's previous participation review system and (c) any other housing project participating in a federal, state or local or government program if during the Controlling Participant's participation in the housing project (i) the housing project was foreclosed upon; (ii) the housing project was transferred by a deed in lieu of foreclosure; or (iii) an event of default, or similarly termed event, was declared against the housing project or the Controlling Participant pursuant to the government program's project documents.
Business Partner Registration System (BPRS) Registration.	Each Controlling Participant must be registered in the BPRS System. Here is a link: *https://hudapps2.hud.gov/apps/part_reg/apps040.cfm*.
Organization Chart	Attach an organization chart with Social Security Numbers or Tax ID numbers for Controlling Participants. See Section B for a description of additional items the organization chart must include.

D. Approval of Participants

If there are no flags in the system and the applicant is able to make all the certifications or HUD has approved any reason why a certification cannot be made, the Previous Participation Review is considered complete and the submission will be approved.

If there are current flags in the system, HUD staff will review:

- The comments in the system related to the flag
- The lender or participant's explanation of the flag and any mitigation of risk associated with the flag.
- Whether flags need to be resolved.
- The flag history in the system to assess patterns of misconduct and risk to the Department.

Based upon this review, including review of the certifications, HUD will determine whether or not the Controlling Participant poses an unacceptable Risk to the Covered Project, in accordance with the definition in 24 CFR 200.212, namely whether the Controlling Participant could be expected to participate in the Covered Project in a manner consistent with furthering the Department's purpose of supporting and providing decent, safe and affordable housing for the public. Based on this determination, HUD may approve, disapprove, limit, or otherwise condition the continued participation of the Controlling Participant in the Triggering Event. HUD will disapprove a Controlling Participant if the Controlling Participant is suspended, debarred or subject to other restriction pursuant to 2 CFR part 180 or 2 CFR part 2424. HUD may disapprove a Controlling Participant if HUD determines: (i) The Controlling Participant is materially restricted, including voluntarily, from doing business with HUD (other than the restrictions listed above) or any other department or agency of the federal government if the Commissioner determines that such restriction demonstrates a significant risk to proceeding with the Triggering Event; or (ii) HUD determines that the Controlling Participant's record of Previous Participation reveals significant risk to proceeding with the Triggering Event. In lieu of disapproval, HUD may (1) condition or limit the Controlling Participant's participation; (2) temporarily withhold issuing a determination in order to gather more necessary information; or (3) require the Controlling Participant to remedy or mitigate outstanding violations of HUD requirements to the Commissioner's satisfaction in order to participate in the Triggering Event. A remedy or mitigation may include resolving any underlying issues that caused the existing flags or other measures that demonstrate to HUD's satisfaction that that the Controlling Participant could be expected to participate in the Covered Project in a manner consistent with furthering the Department's purpose of supporting and providing decent, safe and affordable housing for the public.

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[4] Until further notice, if using the paper Form HUD–2530, use these instructions.

[5] If there is a certification that a controlling participant cannot certify to, the participant must strikethrough that particular certification, initial the strikethrough and attach a signed letter of explanation. This situation should be rare.

APPROVAL OF PARTICIPANTS WITH FLAGS

	Office of Multifamily Housing & Assisted Housing Oversight Division, 220, 221(d)(4), 223(a)(7), 223(f), 231, 241(a) Programs		Office of Residential Healthcare Facilities	Office of Hospital Facilities
	Production	Asset management		
Participants with Tier 1 Flags.	Director of Multifamily Housing Production (HQ).	Director of Asset Management Division (HQ).	Director, Office of Residential Care Facilities or Delegate.	Director, Office of Hospital Facilities.
Participants with Tier 2 Flags.	Production Division Director.	Asset Management Division Director.	Supervisory Account Executive.	Director, Office of Hospital Facilities.
Participants with Tier 3 Flags.	Branch Chief		Supervisory Account Executive.	Director, Office of Hospital Facilities.

E. Rejection of Participants

If a recommendation for rejection is proposed, HUD staff will notify the participant, or lender, if applicable, in advance of the recommendation. This notification will allow an opportunity for the participant to provide additional arguments for HUD's consideration to preserve processing efficiency and cut down on requests for reconsideration.

REJECTION OF PARTICIPANTS WITH FLAGS

	Office of Multifamily Housing & Assisted Housing Oversight Division, 220, 221(d)(4), 223(a)(7), 223(f), 231, 241(a) Programs		Office of Residential Healthcare Facilities	Office of Hospital Facilities
	Production	Asset management		
Participants with Tier 1, Tier 2 or Tier 3 Flags.	Regional Director or Delegate		Division Director, Office of Residential Care Facilities or Delegate.	Division Director, Office of Hospital Facilities.

F. Reconsideration of a Rejection

Participants have the right to request a reconsideration of HUD decisions rejecting participants. Requests for reconsideration must be filed in writing. Participants may provide support for their reconsideration or additional information that was not previously provided. Please see the below table for the officials responsible for rendering reconsideration decisions applicable to each program area. The decision rendered by the officials below is final agency action.

RECONSIDERATION OF A REJECTION

Office of Multifamily Housing & Assisted Housing Oversight Division	Office of Healthcare Programs	
	Office of Residential Healthcare Facilities	Office of Hospital Facilities
Director, Office of Asset Management and Portfolio Oversight or Delegate.	Director, Office of Residential Care Facilities or Delegate.	Director, Office of Hospital Facilities or Delegate.

G. Flag Placement and Resolution

HUD utilizes flags in the APPS system as a way to assess risk associated with participants in Office of Multifamily Housing and Office of Healthcare Programs projects. A flag does not automatically exclude an applicant from participation in HUD's programs; however, flags are considered risk factors that require appropriate mitigation, where possible. Flags are to be a meaningful representation of risk, and therefore, they should not be placed for minor infractions that do not pose a risk to HUD. HUD will notify participants in writing when flags are placed.

H. Types of Flags

HUD has developed three flag tiers, which provide for varying levels of risk to HUD. Tier 1 flags are elevated risk to HUD. HUD considers Tier 1 flags to be a significant long-term risk to HUD and warrant significant mitigation in new transactions. Tier 2 flags are considered an ongoing risk to HUD. For Tier 2 flags that have a resolution date (as listed in the chart below), flags will not be removed until the time period has expired even if the action has been resolved earlier. This is considered a risk factor in production and asset management transactions. Tier 3 flags are considered a single risk to HUD and will be removed when the reason for the flag is corrected.

Tier 1 Flags: Elevated Risk to the Department

Tier 1 flags warrant permanent consideration when reviewing Controlling Participants for their participation in triggering events.

Flag type	Reason	Duration of flag
Mortgage Assignment/Conveyance of Title	Mortgage assigned title or conveyed property to HUD	Permanent flag.*
FHA Claim	Claim payment by HUD	Permanent flag.*
HUD Property Disposition	Foreclosure, loan sale, or other property disposition effort by HUD.	Permanent flag.*
Mortgagee in Possession (MIP)	HUD becomes the MIP	Permanent flag.*
Deed in Lieu of Foreclosure	HUD receives a deed in lieu of foreclosure	Permanent flag.*
Limited Denial of Participation (LDP)—Current or Past	Participant is currently or has previously been placed on the LDP list.	Permanent flag.
Suspension or Debarment—Current or Past	Participant is currently or has previously been placed on the Debarment list or the participant is or was temporarily suspended from participation in HUD programs.	Permanent flag.
Voluntary Abstention or Exclusion—Current or Past	Participant is currently or has previously been subject to a voluntary abstention.	Permanent flag.
Conviction for fraud or embezzlement of funds	Participant has been convicted of fraud or embezzlement of funds.	Permanent flag.

* Unless otherwise determined by HUD due to mitigating circumstances.

Tier 2 Flags: Ongoing Risk to the Department

Tier 2 flags warrant consideration for an extended period of time when reviewing Controlling Participants for their participation in Triggering Events, even after the underlying reason for the flag is resolved. A “Repeated” Offense means there are three or more occurrences.

Flag type	Reason	Duration of flag
Violation of Business Agreements-Unauthorized Distributions.	Repeated incidents of Unauthorized Distributions.	Retained for five (5) years after the placement date of the flag.
Violation of Business Agreements-Unacceptable Physical Condition.	Below 30 Real Estate Assessment Center (REAC) score, two consecutive REAC scores below 60, Repeated REAC scores below 60, or other Repeated failures to maintain decent, safe and sanitary conditions.	Retained for five (5) years after placement of the flag, so long as the most recent REAC score is greater than 59 or the failure to maintain decent, safe and sanitary housing is deemed cured by HUD.
Violation of Business Agreements-Repeated Failure to File Financial Statements.	Repeated Failure to File Financial Statements for three or more occurrences.	Retained for five (5) years after the placement date of the flag.
Violation of Business Agreements-Conversion to Unapproved Use.	Project was converted to a use that is not permitted under the program obligations.	Retained for five (5) years after the placement date of the flag.
Violation of Business Agreements-Unauthorized Alteration to Facility.	Project or part of the project completed a significant addition/alteration/construction/licensure status without prior approval.	Retained for five (5) years after the placement date of the flag.
Violation of Business Agreements-Repeated Unresolved Audit Findings.	Repeated Unresolved Audit Findings	Retained for five (5) years after the placement date of the flag provided that audit findings have been resolved.
Violation of Business Agreements-Miscellaneous.	Repeated violations of business agreements (e.g., breaking use agreement or affordability restrictions, non-compliance with program requirements, non-responsive to HUD requests).	Retained for five (5) years after the placement date of the flag.
Default-Financial	60 days or more behind on loan payments	Retained for five (5) years after the placement date of the flag.
Unauthorized Transfer of Physical Assets (TPA)	When a TPA is completed without prior HUD approval.	Retained for five (5) years after the placement date of the flag.
Suspension/Termination of Payments	When HUD suspends subsidy payments due to non-compliance with Program Obligations.	Retained for five (5) years after the placement date of the flag.
Unauthorized Secondary Financing	When Secondary Financing is utilized without prior HUD approval.	Retained for five (5) years after the placement date of the flag.
General Contractor Performance—Construction Compliance.	Material failure to build project in accordance with approved Plans and Specifications (During Construction Period).	Retained for five (5) years after the placement date of the flag provided that noncompliance has been cured to HUD's satisfaction.
General Contractor Performance—One Year Warranty.	Failure to correct material warranty issues identified in HUD's Nine-Month and 12-Month Warranty Inspections (After Construction Period).	Retained for five (5) years after the placement date of the flag provided that noncompliance has been cured to HUD's satisfaction.

Tier 3 Flags: Temporary Risk to the Department

Tier 3 flags relate to a single and/or less serious incident of non-compliance and can be resolved and removed.

Flag type	Reason	Duration of flag
Failure to File Financial Statements	Automatically Flagged when the Annual Financial Statements are overdue.	Removed when the missing Annual Financial Statements are filed or five (5) years after the placement date of the flag, whichever is sooner.
Delinquent three or more times in the last year	Flagged when borrower fails to remit mortgage payment by the fifteenth of the month, three or more times in a given one-year period.	Removed when there is a one-year period of time in which borrower has made all mortgage payments by the fifteenth of each respective month, or five (5) years after the placement date of the flag, whichever is sooner.
Unacceptable Physical Condition	Most recent REAC score is below 60, and additional (does not need to be consecutive) REAC score(s) below 60 over the past five years..	Removed when the most recent REAC score is above 59.
Unsatisfactory Management Review	Flagged when there is an Unsatisfactory Management Review.	Removed when there is a Satisfactory Management Review, or five (5) years after the placement date of the flag whichever is sooner.
Violation of Business Agreements-Unauthorized Distributions.	One incident of Unauthorized Distributions	Removed when the unauthorized distribution is repaid or five (5) years after the placement date of the flag whichever is sooner.
Violation of Business Agreements-Material Unresolved Audit Findings.	Material Unresolved Audit Findings	Removed when the finding is resolved or five (5) years after the placement date of the flag whichever is sooner.
Failure to Provide or Comply with Action Plan	Failure to provide or comply with a HUD required action plan and/or certification in a timely manner..	Removed when the action plan is received and in good standing or five (5) years after the placement date of the flag whichever is sooner.

Significant Changes to the Guide

HUD will not make any significant changes to the Guide without first offering advance notice and the opportunity for comment for a period of not less than 30 days.

[FR Doc. 2016–11346 Filed 5–16–16; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket Number USCG–2016–0370]

RIN 1625–AA00

Safety Zone; Annual Roy Webster Cross-Channel Swim, Columbia River, Hood River, OR

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard proposes to establish a safety zone on the Columbia River in Hood River, OR. This action is necessary to help ensure the safety of the maritime public during a cross-channel swimming event and would do so by prohibiting unauthorized persons and vessels from entering the safety zone unless authorized by the Sector Columbia River Captain of the Port or a designated representative. We invite your comments on this proposed rulemaking.

DATES: Comments and related material must be received by the Coast Guard on or before June 16, 2016.

ADDRESSES: You may submit comments identified by docket number USCG–2016–0370 using the Federal eRulemaking Portal at *http://www.regulations.gov.* See the “Public Participation and Request for Comments” portion of the **SUPPLEMENTARY INFORMATION** section for further instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions about this proposed rulemaking, call or email Ken Lawrenson, Waterways Management Division, Marine Safety Unit Portland, Coast Guard; telephone 503–240–9319, email *msupdxwwm@uscg.mil.*

SUPPLEMENTARY INFORMATION:

I. Table of Abbreviations

CFR	Code of Federal Regulations
DHS	Department of Homeland Security
FR	Federal Register
NPRM	Notice of proposed rulemaking
§	Section
U.S.C.	United States Code

II. Background, Purpose, and Legal Basis

The Roy Webster Cross-Channel Swim is an annual event that has been occuring for the last 74 years on the Columbia River in the vicinity of Hood River, OR. Registered participants attend the event on Labor Day each year and are ferried across the Columbia River from the Hood River Marina to the Washington shore to start the event. From there the swimmers jump off the ferry and swim back across the river, following a swim lane that is lined with volunteers in sailboats, kayaks and paddleboards. Approximately 300 swimmers participate in this event annually.

The Captain of the Port, Columbia River (COTP) has determined that potential hazards associated with cross-channel swims could be a safety concern for the event participants, any other mariners transiting the area during the event hours, and a potential threat to the marine environment.

The purpose of this rulemaking is to ensure the safety of event participants, the marine environment and the protection of the navigable waterway during the scheduled event. The Coast

Guard proposes this rulemaking under authority in 33 U.S.C. 1231.

III. Discussion of Proposed Rule

The COTP proposes to establish a safety zone on Labor Day of each year between 6 a.m. and noon. As the event consists of swimmers crossing the navigable channel, the Coast Guard feels that it would be necessary to establish a safety zone that would cover all waters of the Columbia River between river mile 169 and river mile 170. Vessels needing to transit through the safety zone during the event would be permitted to enter the safety zone only by obtaining permission from the COTP or a designated representative. The regulatory text the Coast Guard is proposing appears at the end of this document.

IV. Regulatory Analyses

We developed this proposed rule after considering numerous statutes and Executive orders related to rulemaking. Below we summarize our analyses based on a number of these statutes and Executive orders and we discuss First Amendment rights of protestors.

A. Regulatory Planning and Review

Executive Orders 12866 and 13563 direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits. Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This NPRM has not been designated a "significant regulatory action," under Executive Order 12866. Accordingly, the NPRM has not been reviewed by the Office of Management and Budget.

This regulatory action determination is based on the size, location, short duration, and the event's long history. Commercial vessel traffic would be able to transit the area with permission from the COTP or a designated representative. Moreover, the Coast Guard would issue a Broadcast Notice to Mariners via VHF–FM marine channel 16 about the zone, and the rule would allow vessels to seek permission to enter the zone.

B. Impact on Small Entities

The Regulatory Flexibility Act of 1980, 5 U.S.C. 601–612, as amended, requires Federal agencies to consider the potential impact of regulations on small entities during rulemaking. The term "small entities" comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000. The Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule would not have a significant economic impact on a substantial number of small entities.

While some owners or operators of vessels intending to transit the safety zone may be small entities, for the reasons stated in section IV.A above this proposed rule would not have a significant economic impact on any vessel owner or operator.

If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this rule would have a significant economic impact on it, please submit a comment (see **ADDRESSES**) explaining why you think it qualifies and how and to what degree this rule would economically affect it.

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we want to assist small entities in understanding this proposed rule. If the rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. The Coast Guard will not retaliate against small entities that question or complain about this proposed rule or any policy or action of the Coast Guard.

C. Collection of Information

This proposed rule would not call for a new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

D. Federalism and Indian Tribal Governments

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. We have analyzed this proposed rule under that Order and have determined that it is consistent with the fundamental federalism principles and preemption requirements described in Executive Order 13132.

Also, this proposed rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes. If you believe this proposed rule has implications for federalism or Indian tribes, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

E. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of $100,000,000 (adjusted for inflation) or more in any one year. Though this proposed rule would not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

F. Environment

We have analyzed this proposed rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (42 U.S.C. 4321–4370f), and have made a preliminary determination that this action is one of a category of actions that do not individually or cumulatively have a significant effect on the human environment. This proposed rule involves a safety zone lasting approximately six hours that would prohibit entry within a specified section of the Columbia River in the vicinity of Hood River, OR. Normally such actions are categorically excluded from further review under paragraph 34(g) of Figure 2–1 of Commandant Instruction M16475.lD. A preliminary environmental analysis checklist and Categorical Exclusion Determination are available in the docket where indicated under **ADDRESSES**. We seek any comments or information that may lead to the discovery of a significant environmental impact from this proposed rule.

G. Protest Activities

The Coast Guard respects the First Amendment rights of protesters. Protesters are asked to contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to coordinate protest activities so that your message can be received without jeopardizing the safety or security of people, places, or vessels.

V. Public Participation and Request for Comments

We view public participation as essential to effective rulemaking, and will consider all comments and material received during the comment period. Your comment can help shape the outcome of this rulemaking. If you submit a comment, please include the docket number for this rulemaking, indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation.

We encourage you to submit comments through the Federal eRulemaking Portal at *http://www.regulations.gov*. If your material cannot be submitted using *http://www.regulations.gov*, contact the person in the **FOR FURTHER INFORMATION CONTACT** section of this document for alternate instructions.

We accept anonymous comments. All comments received will be posted without change to *http://www.regulations.gov* and will include any personal information you have provided. For more about privacy and the docket, you may review a Privacy Act notice regarding the Federal Docket Management System in the March 24, 2005, issue of the **Federal Register** (70 FR 15086).

Documents mentioned in this NPRM as being available in the docket, and all public comments, will be in our online docket at *http://www.regulations.gov* and can be viewed by following that Web site's instructions. Additionally, if you go to the online docket and sign up for email alerts, you will be notified when comments are posted or a final rule is published.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1231; 50 U.S.C. 191; 33 CFR 1.05–1, 6.04–1, 6.04–6, 160.5; Department of Homeland Security Delegation No. 0170.1.

■ 2. Add § 165.1342 to read as follows:

§165.1342 Annual Roy Webster Cross-Channel Swim, Columbia River, Hood River, OR.

(a) *Regulated area*. The following regulated area is a safety zone. The safety zone will encompass all waters of the Columbia River between River Mile 169 and River Mile 170.

(b) *Definition*. As used in this section—

Designated representative means Coast Guard Patrol Commanders, including Coast Guard coxswains, petty officers, and other officers operating Coast Guard vessels, and Federal, state, and local officers designated by or assisting the Captain of the Port Sector Columbia River in the enforcement of the regulated area.

Non-participant person means a person not registered as a swimmer in the Roy Webster Cross-Channel Swim held on the Columbia River in the vicinity of Hood River, OR, each Labor Day.

(c) *Regulations*. In accordance with the general regulations in 33 CFR part 165, subpart C, non-participant persons and vessels are prohibited from entering, transiting through, anchoring in, or remaining within the regulated area unless authorized by Captain of the Port Sector Columbia River or a designated representative.

(1) Non-participant persons and vessels may request authorization to enter, transit through, anchor in, or remain within the regulated area by contacting the Captain of the Port Sector Columbia River or a designated representative via VHF radio on channel 16. If authorization is granted by the Captain of the Port Sector Columbia River or a designated representative, all persons and vessels receiving such authorization must comply with the instructions of the Captain of the Port Sector Columbia River or a designated representative.

(2) The Coast Guard will provide notice of the safety zone by Local Notice to Mariners, Broadcast Notice to Mariners and on-scene designated representatives.

(d) *Enforcement period*. This safety zone will be enforced on Labor Day of each year, between the hours of 6 a.m. and Noon.

Dated: May 9, 2016.

D.F. Berliner,

Captain, U.S. Coast Guard, Acting Captain of the Port, Sector Columbia River.

[FR Doc. 2016–11515 Filed 5–16–16; 8:45 am]

BILLING CODE 9110–04–P

LIBRARY OF CONGRESS

U.S. Copyright Office

37 CFR Part 202

[Docket No. 2016–3]

Mandatory Deposit of Electronic Books and Sound Recordings Available Only Online

AGENCY: U.S. Copyright Office, Library of Congress.

ACTION: Notice of inquiry.

SUMMARY: In 2010, the U.S. Copyright Office, acting pursuant to section 407 of title 17 and following a public rulemaking process, adopted an interim rule governing mandatory deposit of electronic works that are not available in a physical format. The interim rule refers to such works as "electronic works published in the United States and available only online" (or "online-only works"). The interim rule created a limited exception to the Register's longstanding regulatory exemption that online-only works are not subject to mandatory deposit requirements. It also established best edition criteria and regulations as to electronic serials requested pursuant to section 407. The Library has adopted policies for the use of such materials, including limiting public access to deposited works to dedicated terminals located at the Library of Congress in Washington, DC. These policies were anticipated and discussed during the rulemaking process, but are not memorialized in the regulations.

The Library of Congress is now interested in extending the interim rule to apply to online-only books and sound recordings. Because over six years have passed since the interim rule was adopted, and because the interim rule was intended to inform a more permanent solution and rule, the Copyright Office is initiating a notice of inquiry to further guide its work in this area. The Copyright Office seeks feedback from affected communities regarding the experience with mandatory deposit of electronic serials, generally, as well as comments pertaining to the potential application of mandatory deposit to online-only books and sound recordings, specifically. Based on this feedback, the Office will solicit further written comments and/or invite stakeholder meetings before moving to a rulemaking process.

DATES: Written comments must be received no later than 11:59 p.m. Eastern Time on July 18, 2016.

ADDRESSES: For reasons of government efficiency, the Copyright Office is using the *regulations.gov* system for the submission and posting of public comments in this proceeding. All comments are therefore to be submitted electronically through *regulations.gov.* Specific instructions for submitting comments are available on the Copyright Office Web site at *http://copyright.gov/policy/mandatorydeposit/comment-submission/.* If electronic submission of comments is not feasible due to lack of access to a computer and/or the internet, please contact the Office, using the contact information below, for special instructions.

FOR FURTHER INFORMATION CONTACT: Jacqueline C. Charlesworth, General Counsel and Associate Register of Copyrights, *jcharlesworth@loc.gov;* or Sarang V. Damle, Deputy General Counsel, *sdam@loc.gov.* Both can be reached by telephone at 202–707–8350.

SUPPLEMENTARY INFORMATION:

I. Background

A. Mandatory Deposit Under the Copyright Act Generally

Mandatory deposit provisions, sometimes called "legal deposit" in foreign countries, permit national libraries to demand creative works for their respective collections pursuant to applicable laws, rights, restrictions, regulations, and fines. In the United States, the authority to demand, exempt, and otherwise regulate such works vests with the Register of Copyrights, who administers section 407 of title 17 of the United States Code, part of the Copyright Act.

Section 407 provides that the owner of copyright, or of the exclusive right of publication, in a work published in the United States is required to deposit two complete copies (or, in the case of sound recordings, two phonorecords) of the "best edition" of the work with the Copyright Office [1] for the use or disposition of the Library of Congress.[2] The Library is not entitled to works that fall outside of the statutory framework, *e.g.,* editions not published in the United States.

Section 202.19 of title 37 of the Code of Federal Regulations sets forth a number of rules governing the mandatory deposit of copies and phonorecords under section 407, including certain best edition requirements. Appended to part 202 is a list, entitled " 'Best Edition' of Published Copyrighted Works for the Collection of the Library of Congress" (referred to as the "Best Edition Statement"), which sets forth the best edition criteria for particular categories of works.[3] The same appendix specifies which published version must be deposited in instances where "two or more editions of the same version of a work have been published." [4] The term "best edition of a work" is defined by statute as the "edition, published in the United States at any time before the date of deposit, that the Library of Congress determines to be most suitable for its purpose." [5] The Register has observed that it is really a preservation copy, rather than the best published copy, that is of interest to the Library, and has suggested that section 407 may need to be updated accordingly.[6]

Section 407 further provides that deposit is to be made within three months after such publication.[7] If mandatory deposit is not satisfied, the Register of Copyrights may issue a demand for the work.[8] The copyright owner may be subject to fines and other monetary liability if the owner fails to comply after a demand for deposit is made by the Register.[9]

These general provisions, however, are subject to limitations. Section 407 provides that the Register of Copyrights may by regulation "exempt any categories of material from the deposit requirements of [that] section, or require deposit of only one copy or phonorecord with respect to any categories." [10] Thus, in carrying out the authority provided under section 407, the Register seeks to fulfill the stated needs of the Library of Congress while balancing any competing concerns or requirements of the copyright system and affected parties. Such concerns are considered through a public rulemaking process carried out under the Administrative Procedure Act.[11]

Finally, the registration and deposit provisions of section 408 as to published works generally require the submission for examination of two complete copies of the best edition.[12] And section 408 further states that deposits made under section 407 may be used to satisfy the deposit requirements of section 408 if application, fee and regulatory conditions are met.[13] As such, the extension of mandatory deposit to new categories of online-only works under section 407, and the particular deposit requirements that may be adopted, will necessarily affect registration practices as to works that are typically, or frequently, registered.

B. Mandatory Deposit of Electronic Materials Available Only Online

When regulations implementing section 407 were first promulgated by the Copyright Office in 1978, the Office adopted a broad exemption from the mandatory deposit requirements for "[l]iterary works, including computer programs and automated databases, published in the United States only in the form of machine readable copies (such as magnetic tape or disks, punch cards, or the like) from which the work cannot ordinarily be visually perceived except with the aid of a machine or device." [14] Over time, the Office narrowed this exemption to require the deposit of certain electronic materials if they are made available in a physical medium, such as electronic databases that are published in CD–ROM copies.[15] Until 2010, however, Copyright Office practice exempted from mandatory deposit requirements all electronic works not made available in physical format.[16]

On January 25, 2010, after a period of notice and public comment, the Copyright Office adopted a new interim rule to address the mandatory deposit requirements for published electronic works that are only made available online.[17] For purposes of the interim rule, "electronic works" are defined as "works fixed and published solely in an electronic format." [18] "Online-only works" thus encompasses works that are not published in physical formats and are made available via a live internet connection or downloaded from the internet onto a device and viewed, heard, or used offline. In this regard, it should be noted that the interim rule covers only works that are *published* online, not online works that are only publicly displayed or publicly performed online.[19]

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[1] 17 U.S.C. 407(a).

[2] *Id.* at 407(b).

[3] 37 CFR pt. 202 app. B.

[4] *Id.*

[5] 17 U.S.C. 101.

[6] Maria A. Pallante, *The Next Great Copyright Act,* 36 Columbia J. of L. & the Arts 316, 336 (2013).

[7] 17 U.S.C. 407(a).

[8] *Id.* at 407(d).

[9] *Id.*

[10] *Id.* at 407(c). With respect to certain pictorial, graphic and sculptural works that are published in limited numbers, the statute requires the Register to issue regulations that "provide either for complete exemption from the deposit requirements" of section 407 or "for alternative forms of deposit aimed at providing a satisfactory archival record of a work without imposing practical or financial hardships on the depositor." *Id.* These regulations can be found in 37 CFR 202.19.

[11] *See* 17 U.S.C. 701(e).

[12] 17 U.S.C. 408(b)(2).

[13] *Id.* at 408(b).

[14] 37 CFR 202.19(c)(5) (1978).

[15] In 1989, the Copyright Office amended the machine-readable copies exemption to require the deposit of machine-readable works published in physical form, exempting only "automated databases available only in the United States." 54 FR 42295, 42296, Oct. 16, 1989. Two years later, the Copyright Office amended its regulation to clarify that CD–ROM packages were the preferred form of deposit for machine-readable works published in physical form. 56 FR 47402, Sept. 19, 1991.

[16] *See* 74 FR 34286, 34287, Jan. 15, 2009 (explaining that the established Office practice was to interpret the exclusion for "automated databases available only online in the United States" to refer to all online-only publications). By contrast, works that are published both in an electronic and physical format are subject to the mandatory deposit requirement. 37 CFR 202.19(c)(5).

[17] 75 FR 3863, Jan. 25, 2010; *see also* 74 FR 34286, Jul. 15, 2009.

[18] 37 CFR 202.24(c)(3).

The interim rule did two key things. First, it codified the Office's longstanding practice of exempting online-only works from the requirements of mandatory deposit as a general matter.[20] Second, notwithstanding the general exemption, the interim rule provided, for the first time, a mechanism by which the Office could demand one particular type of online-only work for the Library—namely, "electronic serials." An "electronic serial" is defined as "an electronic work published in the United States and available only online, issued or intended to be issued on an established schedule in successive parts bearing numerical or chronological designations, without subsequent alterations, and intended to be continued indefinitely." [21] The interim rule states that this class include "periodicals, newspapers, annuals, and the journals, proceedings, transactions, and other publications of societies." [22]

In extending mandatory deposit requirements to online-only serials, the Office observed that "the Internet has grown to become a fundamental tool for the publication and dissemination of millions of works of authorship." [23] The Office noted that there were then "more than five thousand scholarly electronic serials available exclusively online, with no print counterparts." [24] Even where the Library purchased a subscription to such a work, it would rarely be able to acquire a permanent copy for its collections, placing the "long-term preservation of the works at risk." [25]

Under the interim rule, a publisher does not need to proactively deposit copies of electronic serials with the Copyright Office.[26] An electronic serial is subject to mandatory deposit only if the Register of Copyrights specifically demands a copy of the online-only serial for the Library; or, put another way, the longstanding exemption continues to apply until overtaken by a demand for a specific work.[27] A publisher receiving such a demand must deposit "one complete copy or a phonorecord" of "the demanded work within three months of the date the demand notice is received." [28] The interim rule also amended the "Best Edition Statement" in appendix B of part 202 of title 37, Code of Federal Regulations, to specify the criteria that should be applied in cases where a publisher has distributed two or more editions of a particular serial.[29] In such a case, for example, the statement indicates that the Library prefers to receive the edition that was published in a "[s]erials-specific structured/markup format," namely, "[c]ontent compliant with the NLM Journal Archiving (XML) Document Type Definition (DTD), with presentation stylesheet(s), rather than without." [30] If the serial was published with metadata elements, the statement also notes that "descriptive data (metadata) should accompany the deposited material," such as "serial or journal title," "volume(s), numbers, issue dates," and "article author(s)." [31] If the serial was published with technological protection measures, the statement also notes that the Library prefers that "[t]echnological measures that control access to or use of the work should be removed." [32]

The interim rule also provides for public access to deposited works, stating that "[c]opies or phonorecords deposited in response to a demand must be able to be accessed and reviewed by the Copyright Office, Library of Congress, and the Library's authorized users on an ongoing basis." [33] More specifically, in response to stakeholders seeking clarification regarding the Library's downloading, distribution, and interlibrary loan practices with respect to electronically deposited works, the **Federal Register** notice announcing the interim rule explained that access to such works would be available only to "authorized users at the Library of Congress" in accordance with the following policies:

- Access to electronic works received through mandatory deposit will be as similar as possible to the access provided to analog works.
- Access to electronic works received through mandatory deposit will be limited, at any one time, to two Library of Congress authorized users.
- Library of Congress authorized users will access the electronic works via a secure server over a secure network that serves Capitol Hill facilities and remote Library of Congress locations. The term "Library of Congress authorized users" includes Library staff, contractors, and registered researchers, and Members, staff and officers of the U.S. House of Representatives and the U.S. Senate. The Library will not make the copyrighted works available to the public over the Internet without rights holders' permissions.
- Authorized users may print from electronic works to the extent allowed by the fair use provisions of the copyright law (17 U.S.C. 107 and 108(f)), as is the case with traditional publications. However, users may not reproduce or distribute (*i.e.*, download or email) copies of deposited electronic works until the Library has explored the advisability of permitting these options and the security and feasibility of the implementing technologies. As part of this process, the Library will seek comment from the public, including copyright owners and publishers, before adopting additional policies governing electronic copying or distribution by electronic transmission.[34]

The Library instituted these policies in recognition of the fact that "electronic works, because of their ease of reproduction and distribution, present special security concerns." [35]

In accordance with these policies, the Library developed a system for providing and controlling access to electronic serials collected under the interim rule. The serials are stored on a server located in the Library's Capitol Hill facilities. The electronic files can be viewed on two secure terminals located in the Microform & Electronic Resources Center ("MERC"), located in the Library of Congress's Jefferson Building, which together constitute the sole point of public access to the files. The terminals have a web-based interface for searching and browsing the electronic serials collected by the Library. Individual articles are opened and read using customized viewing software that prevents users from being able to save or download a copy.[36] The software also allows users to print the entire article to a color printer attached to the terminals, without charge. To help guide their printing activities, users are presented with a set of fair use criteria in a short training manual stored next to the terminal. While users may browse, read, and print articles on the terminals, the Library has disabled access to the terminals' USB ports to prevent users from making electronic copies. Internet access on the terminals has also been disabled.

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[19] *See* 17 U.S.C. 101 ("A public performance or display of a work does not in itself constitute publication.").

[20] 37 CFR 202.19(c)(5) (exempting "[e]lectronic works published in the United States and available only online").

[21] *Id.* at 202.19(b)(4).

[22] *Id.*

[23] 75 FR at 3864.

[24] *Id.*

[25] *Id.* at 3864–65.

[26] 37 CFR 201.19(c)(5) (providing that the exemption from mandatory deposit for online-only works "includes electronic serials available only online only until such time as a demand is issued by the Copyright Office under the regulations set forth in § 202.24 of these regulations").

[27] *See* 37 CFR 202.24(a).

[28] 37 CFR 202.24(a), (a)(3).

[29] 37 CFR pt. 202, app. B, sec. IX.

[30] *Id.* at sec. IX.A.1.a(i).

[31] *Id.* at sec. IX.A.2.

[32] *Id.* at sec. IX.A.3.

[33] 37 CFR 202.24(a)(4).

[34] 75 FR at 3867–68.

[35] 75 FR at 3867.

In adopting the interim rule in 2010, the Copyright Office emphasized that "[t]he rule is interim, and not final, because the Office anticipates that the experience of issuing and responding to demands for online-only works will raise additional issues that should be considered before the regulation becomes final, *e.g.*, the technical details of how an online-only work should be transmitted to the Copyright Office." [37] After issuing the interim rule, the Office met with members of the publishing community on May 24, 2011 to further discuss the Library's expectations and submission questions, but has not further sought or received public comment on the qualified exemption and demand-based deposit system for online-only works through an additional rulemaking process. Since the promulgation of the interim rule, the Library has collected over 400 electronic serial titles that are now available through the two dedicated computer terminals in the MERC.[38]

II. Proposed Expansion of Mandatory Deposit Requirements To Include Online-Only Books and Sound Recordings

Although the 2010 interim rule requires publishers to deposit only electronic serials—and only when the Office issues a demand for such a work—in promulgating that rule, the Register noted that mandatory deposit might be expanded over time to encompass new categories of online-only works.[39] At this time, the Library has communicated to the Copyright Office its interest in obtaining online-only books and online-only sound recordings via mandatory deposit. Accordingly, the Office requests public comment regarding the imposition of a demand-based deposit system, akin to that provided under the interim rule for electronic serials, to these new categories of online-only works.

A. Online-Only Books

The Library has requested that the Copyright Office issue demands for electronic books that have been published solely through online channels. To be clear, in the case of a book published in both physical and electronic formats, the publisher would still be required to deposit the physical format as the "best edition" under section 407, rather than the electronic format.[40]

The Library has some experience in collecting, preserving and providing limited access to electronic deposits of text-based works under the existing interim rule for electronic serials. But there are some notable differences between online-only books and electronic serials. For example, many electronic serials, such as those in certain commercial journal databases, are accessed on a subscription basis and viewed via a live internet connection. Indeed, it was this fact that originally led the Office to adopt mandatory deposit requirements for electronic serials. As the Office noted in the 2010 interim rule, "subscriptions are typically 'access only,' and rarely allow the Library to acquire a 'best edition' copy for its collections." The lack of mandatory deposit in this context thus "place[d] the long-term preservation of the works at risk." [41]

Under any rule requiring mandatory deposit of online-only books, the Library proposes to provide public access to such books under the same policies adopted in the 2010 interim rule (which could be included in the regulatory provision itself), which, as noted above, are as follows:

- Access to electronic works received through mandatory deposit will be as similar as possible to the access provided to analog works.
- Access to electronic works received through mandatory deposit will be limited, at any one time, to two Library of Congress authorized users.
- Library of Congress authorized users will access the electronic works via a secure server over a secure network that serves Capitol Hill facilities and remote Library of Congress locations. The term "Library of Congress authorized users" includes Library staff, contractors, and registered researchers, and Members, staff and officers of the U.S. House of Representatives and the U.S. Senate. The Library will not make the copyrighted works available to the public over the Internet without rights holders' permissions.
- Authorized users may print from electronic works to the extent allowed by the fair use provisions of the copyright law (17 U.S.C. 107 and 108(f)), as is the case with traditional publications. However, users may not reproduce or distribute (*i.e.*, download or email) copies of deposited electronic works until the Library has explored the advisability of permitting these options and the security and feasibility of the implementing technologies. As part of this process, the Library will seek comment from the public, including copyright owners and publishers, before adopting additional policies governing electronic copying or distribution by electronic transmission.

Although the above policies are identical to those articulated in the 2010 interim rule, the Library believes that in the future it may be able to comply with these policies using different technical means than are currently available. In addition, as noted above, the "Best Edition Statement" specifies the criteria that should be applied in cases where a publisher issues two or more editions of the same electronic serial. But these criteria, listed in 37 CFR, part 202, appendix B, do not appear to readily extend to electronic books. To this end, the Library believes it is possible that the criteria specified in the Library's "Recommended Formats Statement" [42] for digital textual works could be adapted for this purpose.

B. Online-Only Sound Recordings

The Library has also communicated to the Copyright Office its interest in acquiring online-only sound recordings under section 407. Demands would issue only for sound recordings that are fixed and published solely in online-only electronic format. In the case of a sound recording published in both physical and electronic form, the publisher would be required to deposit the physical format as the "best edition," rather than the electronic version.[43]

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[36] It appears that, as a technical matter, the article is copied to a temporary location on the terminal's hard drive before it is opened by the viewing software.

[37] 75 FR at 3864.

[38] Nonetheless, there is some agreement that the underlying provisions of the Copyright Act, codified in 1976, can only accomplish so much. As a general observation, the Office of the Inspector General of the Library of Congress recently commented that mandatory deposit may be one of several means of obtaining electronic deposits, but that in some cases "negotiated arrangements with private and public entities may be the only way forward." Office of the Inspector General, The Library Needs to Determine an eDeposit and eCollections Strategy 11 (2015), *available at https://www.loc.gov/portals/static/about/documents/edeposit-and-ecollections-strategy-april-2015.pdf.* More specifically, the Register has testified that the mandatory deposit provisions in title 17 are "out of date and require attention" from Congress, and that issues include the "operation and relationship of mandatory deposit requirements to copyright registration requirements, the viability of 'best edition' requirements in the digital age, security of electronic works, and consideration of the Library's stated goals." *Register's Perspective on Copyright Review: Hearing Before the H. Comm. on Judiciary,* 114th Cong. 37–38 (2015) (statement of Maria A. Pallante, Register of Copyrights).

[39] 75 FR at 3864.

[40] *See* 37 CFR 202.19(c)(5).

[41] 75 FR at 3864.

[42] *https://www.loc.gov/preservation/resources/rfs/TOC.html.*

As with online-only books, it seems that many, if not most, published sound recordings are available not only via subscription services, but also for purchase and download. As explained above, this is distinct from electronic serials, many of which are accessible to end users only through a subscription service. The Office invites comment on this difference as it may relate to the advisability of extending on-demand deposit requirements to online-only sound recordings, including the need for such mandatory deposit to further the Library's collection and preservation goals.

Under any rule requiring mandatory deposit of online-only sound recordings, the Library would provide public access to such recordings. The Library currently has a system by which authorized users can access and listen to digitized copies of physical sound recordings collected through other means at the Madison Building of the Library of Congress. Currently, users may access such recordings through six dedicated computer terminals.[44] The Library, however, expects to modify this system to bring it into compliance with the policies identified in the 2010 interim rule before it is used to provide access to any online-only sound recordings obtained via mandatory deposit. Those policies are:

- Access to electronic works received through mandatory deposit will be as similar as possible to the access provided to analog works.
- Access to electronic works received through mandatory deposit will be limited, at any one time, to two Library of Congress authorized users.
- Library of Congress authorized users will access the electronic works via a secure server over a secure network that serves Capitol Hill facilities and remote Library of Congress locations. The term "Library of Congress authorized users" includes Library staff, contractors, and registered researchers, and Members, staff and officers of the U.S. House of Representatives and the U.S. Senate. The Library will not make the copyrighted works available to the public over the Internet without rights holders' permissions.
- Users may not reproduce or distribute (*i.e.,* download or email) copies of deposited electronic works until the Library has explored the advisability of permitting these options and the security and feasibility of the implementing technologies. As part of this process, the Library will seek comment from the public, including copyright owners and publishers, before adopting additional policies governing electronic copying or distribution by electronic transmission.

Again, although, with the exception of the policy regarding printing of electronic works, the above policies are identical to those articulated in the 2010 interim rule, the Library believes that in the future it may be able to comply with these policies using different technical means than are currently available. In addition, no "best edition" criteria exist yet for online-only sound recordings. Here too, however, the Library is proposing that the criteria specified in the Library's "Recommended Formats Statement"[45] for digital audio works could be adapted for this purpose.

III. Subjects of Inquiry

The Office invites written comments on the general subjects below. A party choosing to respond to this notice of inquiry need not address every subject, but the Office requests that responding parties clearly identify and separately address each subject for which a response is submitted. In responding, please identify your particular interest in and experience with these issues.

1. Please comment on the efficacy of the 2010 interim rule, including whether it adequately addresses the digital collection and preservation needs of the Library of Congress, whether it has adequately addressed the concerns of affected parties, and whether it is a good framework for further developing section 407.

2. Please comment on the Library's adopted policies as to the interim rule and/or their application to online-only books and/or sound recordings.

3. Please comment on the information technology, security, and/or other requirements that should apply to the Library's receipt and storage of, and public access to, any online-only books and/or sound recordings collected under section 407.

4. Please provide comments and observations regarding the application of "best edition" requirements to online-only books and/or sound recordings, including whether and how the "best edition" criteria for electronic serials found in part 202 of 37 CFR, appendix B, or the guidelines from the Library's Recommended Formats Statement, might or might not be adapted to address these additional categories of online-only works.

Dated: May 11, 2016.

Maria A. Pallante,

Register of Copyrights, U.S. Copyright Office.

[FR Doc. 2016–11613 Filed 5–16–16; 8:45 am]

BILLING CODE 1410–30–P

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[43] *See* 37 CFR 202.19(c)(5).

[44] The Library's Motion Picture, Broadcasting, and Recorded Sound Division currently allows Library patrons to listen to digitized versions of sound recordings in its Recorded Sound Collection via either one of five dedicated computers located in the Recorded Sound Reference Center's main listening room in the Madison Building, or at an additional terminal located in a private listening room set off from the main listening room. *See generally* Guidelines for Listening to Sound Recordings, Library of Congress, *https://www.loc.gov/rr/record/rrinstructions.html.* Public use of these facilities is by appointment only; in advance of the appointment, the Library digitizes any requested materials and copies those materials onto a server located at the Packard Campus of the National Audio-Visual Conservation Center of the Library, located in Culpeper, Virginia. The content is then downloaded to the Madison Building terminals via a 75-mile dedicated fiber optic cable network that connects the Packard Campus to the Library's Capitol Hill facilities. In describing this arrangement, the Copyright Office does not mean to suggest an opinion on the copyright implications of such a system.

[45] *https://www.loc.gov/preservation/resources/rfs/TOC.html.*

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2016–0070 FRL–9945–23–Region 9]

Approval of California State Air Plan Revisions, Eastern Kern Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve revisions to the Eastern Kern Air Pollution Control District (EKAPCD) portion of the California State Implementation Plan (SIP). These revisions concern administrative changes of a previously approved regulation and emissions of volatile organic compounds (VOCs) from aerospace coating assembly and coating operations and metal, plastic and pleasure craft parts and products coating operations. We are proposing to approve local rules to regulate these activities under the Clean Air Act (CAA or the Act).

DATES: Any comments on this proposal must arrive by June 16, 2016.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R09–OAR–2016–0070 at *http://www.regulations.gov,* or via email to *Steckel.Andrew@epa.gov.* For comments submitted at *Regulations.gov,* follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov.* For either manner of submission, the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the Web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: Vanessa Graham, EPA Region IX, (415) 947–4120, *graham.vanessa@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us" and "our" refer to the EPA. This proposal addresses the following EKAPCD rules: Rule 103.1, "Inspection of Public Records," Rule 410.4, "Metal, Plastic, and Pleasure Craft Parts and Products Coating Operations," and Rule 410.8, "Aerospace Assembly and Coating Operations." In the Rules and Regulations section of this **Federal Register**, we are approving these local rules in a direct final action without prior proposal because we believe these SIP revisions are not controversial. If we receive adverse comments, however, we will publish a timely withdrawal of the direct final rule and address the comments in subsequent action based on this proposed rule. Please note that if we receive adverse comment on a particular rule, we may adopt as final those rules that are not the subject of an adverse comment.

We do not plan to open a second comment period, so anyone interested in commenting should do so at this time. If we do not receive adverse comments, no further activity is planned. For further information, please see the direct final action.

Dated: April 4, 2016.

Jared Blumenfeld,

Regional Administrator, Region IX.

[FR Doc. 2016–11513 Filed 5–16–16; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

49 CFR Part 1122

[Docket No. EP 731]

Rules Relating to Board-Initiated Investigations

AGENCY: Surface Transportation Board.

ACTION: Notice of proposed rulemaking.

SUMMARY: Through this Notice of Proposed Rulemaking, the Surface Transportation Board (Board or STB) is proposing rules for investigations conducted on the Board's own initiative pursuant to the Surface Transportation Board Reauthorization Act of 2015.

DATES: Comments are due by June 15, 2016. Replies are due by July 15, 2016.

ADDRESSES: Comments and replies may be submitted either via the Board's e-filing format or in the traditional paper format. Any person using e-filing should attach a document and otherwise comply with the instructions at the E–FILING link on the Board's Web site, at *http://www.stb.dot.gov.* Any person submitting a filing in the traditional paper format should send an original and 10 copies to: Surface Transportation Board, Attn: EP 731, 395 E Street SW., Washington, DC 20423–0001. Copies of written comments and replies will be available for viewing and self-copying at the Board's Public Docket Room, Room 131, and will be posted to the Board's Web site.

FOR FURTHER INFORMATION CONTACT: Scott M. Zimmerman at (202) 245–0386. [Assistance for the hearing impaired is available through the Federal Information Relay Service (FIRS) at 1–800–877–8339.]

SUPPLEMENTARY INFORMATION: Section 12 of the *STB Reauthorization Act* authorizes the Board to investigate, on its own initiative, issues that are "of national or regional significance" and are subject to the Board's jurisdiction under 49 U.S.C. Subtitle IV, Part A. Under the statute, the Board must issue rules implementing this investigative authority not later than one year after the date of enactment of the *STB Reauthorization Act* (by December 18, 2016).

The Board accordingly proposes regulations, to be set forth at 49 CFR part 1122, establishing procedures for investigations conducted on the Board's own initiative pursuant to Section 12 of the *STB Reauthorization Act.* The proposed regulations would not apply to other types of investigations that the Board may conduct.

Introduction

The *STB Reauthorization Act* provides a basic framework for conducting investigations on the Board's own initiative, as follows:

Within 30 days after initiating an investigation, the Board must provide notice to parties under investigation stating the basis for such investigation. The Board may only investigate issues that are of national or regional significance. Parties under investigation have a right to file a written statement describing all or any facts and circumstances concerning a matter under investigation, and the Board has an obligation to separate the investigative and decisionmaking functions of Board staff to the extent practicable.

Investigations must be dismissed if they are not concluded with "administrative finality within one year after commencement."[1] In any such investigation, Board staff must make available to the parties under investigation and the Board Members any recommendations made as a result of the investigation and a summary of the findings that support such recommendations. Within 90 days of receiving the recommendations and summary of findings, the Board must either dismiss the investigation if no further action is warranted, or initiate a proceeding to determine whether a provision of 49 U.S.C. Subtitle IV, Part A has been violated. Any remedy that the Board may order as a result of such a proceeding may only be applied prospectively.

The *STB Reauthorization Act* further requires that the rules issued under Section 12 must comply with the requirements of 49 U.S.C. 11701(d) (as amended by the *STB Reauthorization Act*), satisfy due process requirements, and take into account ex parte constraints.

Summary of Proposed Rules

To implement this statutory framework for investigations, the Board is proposing a three-stage process, consisting of (1) Preliminary Fact-Finding, (2) Board-Initiated Investigations, and (3) Formal Board Proceedings. Each of these stages is described below and defined in § 1122.1 of the proposed regulations provided in this Notice of Proposed Rulemaking. Section 1122.2 defines the scope and applicability of the proposed regulations, stating that they would apply only to Board matters subject to Section 12 of the *STB Reauthorization Act.*

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[1] S. Rep. No. 114–52, 12 (2015) (explaining that the one-year deadline for investigations conducted on the Board's own initiative does not include any Board proceeding conducted subsequent to the investigation).

1. Preliminary Fact-Finding

During the Preliminary Fact-Finding stage, Board staff would conduct a nonpublic inquiry regarding an issue to determine if there is a potential violation of 49 U.S.C. Subtitle IV, Part A, of national or regional significance that warrants a Board-Initiated Investigation. Information identifying a potential violation of national or regional significance could come from a variety of sources, including, but not limited to, third party tips, referrals from other agencies or Congress, reports submitted to the Board, or news articles.

The goal of Preliminary Fact-Finding would be for Board staff to decide whether to close its fact-gathering or request authorization to open a Board-Initiated Investigation and determine if a violation has in fact occurred. *See* § 1122.3 (describing the Preliminary Fact-Finding process). To assist in making this determination, Board staff may request that parties voluntarily provide testimony, information, or documents. (As an investigation will not have been formally initiated, Board staff would not have authority to issue subpoenas to compel testimony or the production of information or documents during Preliminary Fact-Finding. *Cf.* §§ 1122.3 & 1122.9.) Under the proposed rules, Board staff would terminate Preliminary Fact-Finding if it becomes evident from information available to Board staff that (1) the potential violation was not of national or regional significance or was not subject to the Board's jurisdiction under 49 U.S.C. Subtitle IV, Part A, or (2) no violation likely occurred. However, if Board staff were to decide that (1) a violation of Part A subject to the Board's jurisdiction may have occurred and (2) that the potential violation may be of national or regional significance warranting the opening of a staff investigation, staff would seek authorization from the Board to pursue a Board-Initiated Investigation.

As a matter of policy, Preliminary Fact-Finding generally would be nonpublic and confidential, subject to the provisions found in § 1122.6,[2] in order to protect the integrity of any subsequent investigation and to protect parties involved from possibly unwarranted reputational or other harm.

2. Board-Initiated Investigation

To commence a Board-Initiated Investigation (which statutorily must conclude with administrative finality within one year), the Board would issue an Order of Investigation and provide a copy of the order to the parties under investigation within 30 days of issuance. *See* §§ 1122.4 & 1122.5. The Board may commence a Board-Initiated Investigation with or without Board staff having conducted Preliminary Fact-Finding. The Order of Investigation would state the basis for the investigation and identify the Investigating Officer(s) who would be conducting the investigation for the Board. *See* § 1122.4.

As with Preliminary Fact-Finding, Board-Initiated Investigations generally would be nonpublic and confidential, except as provided by § 1122.6, in order to protect the integrity of the process and to protect parties under investigation from possibly unwarranted reputational damage or other harm. Parties who are not the subject of the investigation would not be able to intervene or participate as a matter of right in Board-Initiated Investigations. Section 1122.8.

The goal of the Board-Initiated Investigation would be for the Investigating Officer(s) to decide whether to recommend to the Board that it dismiss the investigation or open a proceeding to determine if a violation of 49 U.S.C. Subtitle IV, Part A occurred. To assist in making this determination, the Investigating Officer(s) would be able to interview or depose witnesses, inspect property and facilities, and request the production of any information, documents, books, papers, correspondence, memoranda, agreements or other records, in any form or media, potentially relevant or material to the basis for the Board-Initiated Investigation, with the power of subpoena to compel the production of documents or testimony of witnesses, if necessary. *See* § 1122.9. Any persons or entities producing such information or documents to the Board would be required to follow the procedures set forth at § 1122.7 in order to preserve any relevant confidentiality claims and to submit the certifications required in § 1122.11(a), regarding the diligence of any search, and (b) regarding responsive documents withheld based on claims of privilege. Persons or entities providing testimony or producing information or documents to the Board would be subject to the provisions of § 1122.11(c) concerning false statements.

Under the proposed regulations, the Investigating Officer(s) would be required to conclude the Board-Initiated Investigation no later than 275 days after issuance of the Order of Investigation and, at that time, submit to the Board and the parties under investigation any recommendations made as a result of the Board-Initiated Investigation and a summary of the findings that support such recommendations. *See* § 1122.5(b). The proposed 275-day timeline would provide Board Members the maximum statutory time allotted (*i.e.*, 90 days) to review the Investigating Officer(s)' recommendations and summary of findings and decide whether to dismiss the Board-Initiated Investigation or open a Formal Board Proceeding, while still concluding the Board-Initiated Investigation with administrative finality within one year of its commencement. *See* § 1122.5(b) & (c).

The Board recognizes that potential violations that are "of national or regional significance" could have serious and far-reaching consequences. The Board, therefore, will endeavor to resolve Board-Initiated Investigations as soon as possible. To be clear, 275 days would be the *maximum* amount of time for the Investigating Officer(s) to submit the recommendations and summary of findings to the Board Members and parties under investigation.

Investigating Officer(s), in their discretion and time permitting, would have the option of presenting (orally or in writing) their recommendations and/or summary of findings to parties under investigation *prior to* submitting this information to the Board Members. In such cases, the Investigating Officer(s) would be required to permit the parties under investigation to submit a written response to their recommendations and/or summary of findings. The Investigating Officer(s) would then submit their recommendations and summary of findings, as well as any response from the parties under investigation, to the Board members and parties under investigation.

If the Investigating Officer(s) were to decide not to use the optional provisions described above, parties subject to investigation would still be allowed to submit written statements to the Board at any time pursuant to 49 U.S.C. 11701(d)(3). *See* § 1122.12.

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[2] Section 1122.6 allows the public disclosure of information and documents obtained during Preliminary Fact-Finding or a Board-Initiated Investigation, and the existence of Preliminary Fact-Finding or a Board-Initiated Investigation, under certain circumstances.

3. Formal Board Proceeding

Upon receipt of the recommendations and summary of findings from the Investigating Officers, the Board would decide whether to open a public Formal Board Proceeding to determine whether a provision of 49 U.S.C. Subtitle IV, Part A had been violated. If so, the Board would issue a public Order to Show Cause as described in § 1122.5(c) and (d). The Order to Show Cause would state the basis for the proceeding and set forth a procedural schedule. *See* § 1122.5(d).

4. Other Related Issues

Separation of Investigation and Decisionmaking Functions. In all matters governed by the regulations proposed at 49 CFR part 1122, the Board would separate the investigative and decisionmaking functions of Board staff, to the extent practicable. *See* 49 U.S.C. 11701(d)(5); § 1122.4.

Ex Parte Communications. Section 12(c)(3) of the *STB Reauthorization Act* requires the Board, in issuing these rules, to take into account ex parte constraints. Consistent with analogous ex parte constraints in other procedures at the Board, the Board Members, as a matter of policy, would not engage in off-the-record verbal communications concerning the matters under investigation with parties subject to Board-Initiated Investigations. However, as provided in § 1122.12, parties under investigation would have the right to submit written statements to the Board at any time.

Settlement. During Board-Initiated Investigations, the Investigating Officer(s) would be able to engage in settlement negotiations with parties under investigation. If, at any time during the investigation, the Investigating Officer(s) and parties under investigation reach a tentative settlement agreement, the Investigating Officer(s) would submit the settlement agreement as part of their proposed recommendations to the Board Members for approval or disapproval, along with the summary of findings supporting the proposed agreement. The Board would then decide, in accordance with § 1122.5, whether to approve the agreement and/or dismiss the investigation or open a Formal Board Proceeding.

Conclusion

The proposed regulations described above and set forth below implement the investigative authority conferred to the Board in the *STB Reauthorization Act*, in conformance with the requirements of Section 12. The Board invites public comment on the proposed regulations described herein.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (RFA), 5 U.S.C. 601–612, generally requires a description and analysis of new rules that would have a significant economic impact on a substantial number of small entities. In drafting a rule, an agency is required to: (1) Assess the effect that its regulation will have on small entities; (2) analyze effective alternatives that may minimize a regulation's impact; and (3) make the analysis available for public comment. Sections 601–604. In its notice of proposed rulemaking, the agency must either include an initial regulatory flexibility analysis, Section 603(a), or certify that the proposed rule would not have a "significant impact on a substantial number of small entities." Section 605(b). The impact must be a direct impact on small entities "whose conduct is circumscribed or mandated" by the proposed rule. *White Eagle Coop.* v. *Conner*, 553 F.3d 467, 480 (7th Cir. 2009).

The proposed regulations here only specify procedures related to investigations of matters of regional or national significance conducted on the Board's own initiative and do not mandate or circumscribe the conduct of small entities. Therefore, the Board certifies under 5 U.S.C. 605(b) that this rule will not have a significant economic impact on a substantial number of small entities as defined by the RFA. A copy of this decision will be served upon the Chief Counsel for Advocacy, Office of Advocacy, U.S. Small Business Administration, Washington, DC 20416.

List of Subjects in 49 CFR part 1122

Investigations.

It is ordered:

1. Comments are due by June 15, 2016. Replies are due by July 15, 2016.

2. A copy of this decision will be served upon Chief Counsel for Advocacy, Office of Advocacy, U.S. Small Business Administration.

3. Notice of this decision will be published in the **Federal Register**.

4. This decision is effective on its service date.

Decided: May 6, 2016.

By the Board, Chairman Elliott, Vice Chairman Miller, and Commissioner Begeman.

Kenyatta Clay,

Clearance Clerk.

For the reasons set forth in the preamble, the Surface Transportation Board proposes to amend title 49, chapter X, subchapter B, of the Code of Federal Regulations by adding part 1122 to read as follows:

PART 1122—BOARD-INITIATED INVESTIGATIONS

Sec.
1122.1 Definitions.
1122.2 Scope and applicability of this part.
1122.3 Preliminary Fact-Finding.
1122.4 Board-Initiated Investigations.
1122.5 Procedural rules.
1122.6 Confidentiality.
1122.7 Request for confidential treatment.
1122.8 Limitation on participation.
1122.9 Power of persons conducting Board-Initiated Investigations.
1122.10 Transcripts.
1122.11 Certifications and false statements.
1122.12 Right to submit statements.
Appendix A to Part 1122—Informal Procedure Relating to Recommendations and Summary of Findings From the Board-Initiated Investigation

Authority: 49 U.S.C. 1321, 11144, 11701.

§ 1122.1 Definitions.

(a) *Board-Initiated Investigation* means an investigation instituted by the Board pursuant to an Order of Investigation and conducted in accordance with Section 12 of the Surface Transportation Board Reauthorization Act of 2015, now incorporated and codified at 49 U.S.C. 11701.

(b) *Formal Board Proceeding* means a public proceeding instituted by the Board pursuant to an Order to Show Cause after a Board-Initiated Investigation has been conducted.

(c) *Investigating officer(s)* means the individual(s) designated by the Board in an Order of Investigation to conduct a Board-Initiated Investigation.

(d) *Preliminary fact-finding* means an inquiry conducted by Board staff prior to the opening of a Board-Initiated Investigation.

§ 1122.2 Scope and applicability of this part.

This part applies only to matters subject to Section 12 of the Surface Transportation Board Reauthorization Act of 2015, 49 U.S.C. 11701.

§ 1122.3 Preliminary Fact-Finding.

The Board staff may, in its discretion, conduct nonpublic Preliminary Fact-Finding, subject to the provisions of

§ 1122.6, to determine if an alleged violation could be of national or regional significance and subject to the Board's jurisdiction under 49 U.S.C. Subtitle IV, Part A, and warrants a Board-Initiated Investigation. Where it appears from Preliminary Fact-Finding that a Board-Initiated Investigation is appropriate, staff shall so recommend to the Board. Where it appears from the Preliminary Fact-Finding that a Board-Initiated Investigation is not appropriate, staff shall conclude its Preliminary Fact-Finding and notify any parties involved that the process has been terminated.

§ 1122.4 Board-Initiated Investigations.

The Board may, in its discretion, commence a nonpublic Board-Initiated Investigation of any matter of national or regional significance that is subject to the jurisdiction of the Board under 49 U.S.C. Subtitle IV, Part A, subject to the provisions of § 1122.6, by issuing an Order of Investigation. Orders of Investigation shall state the basis for the Board-Initiated Investigation and identify the Investigating Officer(s). The Board may add or remove Investigating Officer(s) during the course of a Board-Initiated Investigation. To the extent practicable, an Investigating Officer shall not participate in any decisionmaking functions in any Formal Board Proceeding(s) opened as a result of any Board-Initiated Investigation(s) that he or she conducted.

§ 1122.5 Procedural rules.

(a) Not later than 30 days after commencing a Board-Initiated Investigation, the Investigating Officer(s) shall provide the parties under investigation a copy of the Order of Investigation. If the Board adds or removes Investigating Officer(s) during the course of the Board-Initiated Investigation, it shall provide written notification to the parties under investigation.

(b) Not later than 275 days after issuance of the Order of Investigation, the Investigating Officer(s) shall submit to the Board and the parties under investigation:

(1) Any recommendations made as a result of the Board-Initiated Investigation; and

(2) A summary of the findings that support such recommendations.

(c) Not later than 90 days after receiving the recommendations and summary of findings, the Board shall decide whether to dismiss the Board-Initiated Investigation if no further action is warranted or initiate a Formal Board Proceeding to determine whether any provision of 49 U.S.C. Subtitle IV, Part A, has been violated in accordance with Section 12 of the Surface Transportation Board Reauthorization Act of 2015. The Board shall dismiss any Board-Initiated Investigation that is not concluded with administrative finality within one year after the date on which it was commenced.

(d) A Formal Board Proceeding commences upon issuance of a public Order to Show Cause. The Order to Show Cause shall state the basis for the Formal Board Proceeding and set forth a procedural schedule.

§ 1122.6 Confidentiality.

(a) All information and documents obtained under § 1122.3 or § 1122.4, whether or not obtained pursuant to a Board request or subpoena, and all activities conducted by the Board under this part prior to the opening of a Formal Board Proceeding, shall be treated as nonpublic by the Board and its staff except to the extent that:

(1) The Board directs or authorizes the public disclosure of activities conducted under this part prior to the opening of a Formal Board Proceeding;

(2) The information or documents are made a matter of public record during the course of an administrative proceeding; or

(3) Disclosure is required by the Freedom of Information Act, 5 U.S.C. 552 or other relevant provision of law.

(b) Procedures by which persons submitting information to the Board pursuant to this part of title 49, chapter X, subchapter B, of the Code of Federal Regulations may specifically seek confidential treatment of information for purposes of the Freedom of Information Act disclosure are set forth in § 1122.7. A request for confidential treatment of information for purposes of Freedom of Information Act disclosure shall not, however, prevent disclosure for law enforcement purposes or when disclosure is otherwise found appropriate in the public interest and permitted by law.

§ 1122.7 Request for confidential treatment.

Any person that produces documents to the Board pursuant to § 1122.3 or § 1122.4 may claim that some or all of the information contained in a particular document or documents is exempt from the mandatory public disclosure requirements of the Freedom of Information Act (FOIA), 5 U.S.C. 552, is information referred to in 18 U.S.C. 1905, or is otherwise exempt by law from public disclosure. In such case, the person making such a claim shall, at the time the person produces the document to the Board, indicate on the document that a request for confidential treatment is being made for some or all of the information in the document. In such case, the person making such a claim also shall file a brief statement specifying the specific statutory justification for non-disclosure of the information in the document for which confidential treatment is claimed. If the person states that the information comes within the exception in 5 U.S.C. 552(b)(4) for trade secrets and commercial or financial information, and the information is responsive to a subsequent FOIA request to the Board, 49 CFR 1001.4 shall apply.

§ 1122.8 Limitation on participation.

No party who is not the subject of a Board-Initiated Investigation may intervene or participate as a matter of right in any such Board-Initiated Investigation under this part.

§ 1122.9 Power of persons conducting Board-Initiated Investigations.

(a) The Investigating Officer(s), in connection with any Board-Initiated Investigation, may interview or depose witnesses, inspect property and facilities, and request and require the production of any information, documents, books, papers, correspondence, memoranda, agreements, or other records, in any form or media, potentially relevant or material to the issues related to the Board-Initiated Investigation. The Investigating Officer(s), in connection with a Board-Initiated Investigation, also may issue subpoenas, in accordance with 49 U.S.C. 1321, to compel the attendance of witnesses, the production of any of the records and other documentary evidence listed above, and access to property and facilities.

(b) With regard for due process, the Board may for good cause exclude a particular attorney from further participation in any Board-Initiated Investigation in which the attorney is obstructing the Board-Initiated Investigation.

§ 1122.10 Transcripts.

Transcripts, if any, of investigative testimony shall be recorded solely by the official reporter or other person or by means authorized by the Board or by the Investigating Officer(s).

§ 1122.11 Certifications and false statements.

(a) When producing documents under this part, the producing party shall submit a statement certifying that such person has made a diligent search for the responsive documents and is producing all the documents called for by the Investigating Officer(s). If any responsive document(s) are not produced for any reason, the producing party shall state the reason therefor.

(b) If any responsive documents are withheld because of a claim of the attorney-client privilege, work product privilege, or other applicable privilege, the producing party shall submit a list of such documents which shall, for each document, identify the attorney involved, the client involved, the date of the document, the person(s) shown on the document to have prepared and/or sent the document, and the person(s) shown on the document to have received copies of the document.

(c) Under this part, any person making false statements under oath is subject to criminal penalties for perjury under 18 U.S.C. 1621. Any person who knowingly and willfully makes false or fraudulent statements, whether under oath or otherwise, or who falsifies, conceals, or covers up a material fact, or submits any false writing or document, knowing it to contain false, fictitious, or fraudulent information is subject to the criminal penalties set forth in 18 U.S.C. 1001.

§ 1122.12 Right to submit statements.

Any party subject to a Board-Initiated Investigation may, at any time during the course of a Board-Initiated Investigation, submit to the Board written statements of facts or circumstances, with any relevant supporting evidence, concerning the subject of that investigation.

Appendix A to Part 1122—Informal Procedure Relating to Recommendations and Summary of Findings From the Board-Initiated Investigation

(a) After conducting sufficient investigation and prior to submitting recommendations and a summary of findings to the Board, the Investigating Officer, in his or her discretion, may inform the parties under investigation (orally or in writing) of the proposed recommendations and summary of findings that may be submitted to the Board. If the Investigating Officer so chooses, he or she shall also advise the parties under investigation that they may submit a written statement, as explained below, to the Investigating Officer prior to the consideration by the Board of the recommendations and summary of findings. This optional process is in addition to, and does not limit in any way, the rights of parties under investigation otherwise provided for in this part.

(b) Unless otherwise provided for by the Investigating Officer, parties under investigation may submit written statement(s) described above within 14 days after of being informed by the Investigating Officer of the proposed recommendation(s) and summary of findings, and such statements shall be no more than 15 pages, double spaced on 8½ by 11 inch paper, setting forth the views of the parties under investigation of factual or legal matters relevant to the commencement of a Formal Board Proceeding. Any statement of fact included in the submission must be sworn to by a person with personal knowledge of such fact.

(c) Such written statements, if the parties under investigation choose to submit, shall be submitted to the Investigating Officer. The Investigating Officer shall provide any written statement(s) from the parties under investigation to the Board at the same time that he or she submits his or her recommendations and summary of findings to the Board.

[FR Doc. 2016–11382 Filed 5–16–16; 8:45 am]

BILLING CODE 4915–01–P

Notices

Federal Register
Vol. 81, No. 95
Tuesday, May 17, 2016

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Food and Nutrition Service

Agency Information Collection Activities: Proposed Collection; Comment Request—Information Collection for the Child and Adult Care Food Program

AGENCY: Food and Nutrition Service, USDA.

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, this notice invites the general public and other public agencies to comment on the Agency's proposed information collection for the Child and Adult Care Food Program. This collection is a revision of a currently approved information collection.

DATES: Written comments must be received on or before July 18, 2016.

ADDRESSES: Comments are invited on: (1) Whether the proposed collection of information is necessary for the proper performance of the Agency's functions, including whether the information will have practical utility; (2) the accuracy of the Agency's estimate of the proposed information collection burden, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on those who are to respond, including use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments may be sent to Andrea Farmer, Policy and Program Development Division, Child Nutrition Programs, 3101 Park Center Drive, Alexandria, VA 22302. Comments will also be accepted through the Federal eRulemaking Portal. Go to *http://www.regulations.gov,* and follow the online instructions for submitting comments electronically.

All responses to this notice will be summarized and included in the request for Office of Management and Budget (OMB) approval. All comments will also become a matter of public record.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of this information collection should be directed to Andrea Farmer, Policy and Program Development Division, Child Nutrition Programs, 3101 Park Center Drive, Alexandria, VA 22302.

SUPPLEMENTARY INFORMATION:

Title: 7 CFR part 226, Child and Adult Care Food Program.

OMB Number: 0584–0055.

Expiration Date: September 30, 2016.

Type of Request: Revision of a currently approved collection.

Abstract: Section 17 of the Richard B. Russell National School Lunch Act (NSLA), as amended, (42 U.S.C. 1766), authorizes the CACFP to provide cash reimbursement and commodity assistance, on a per meal basis, for food service to children in nonresidential child care centers and family day care homes, and to eligible adults in nonresidential adult day care centers. The U.S. Department of Agriculture, through the Food and Nutrition Service, has established application, monitoring, and reporting requirements to manage the CACFP effectively. The purpose of this submission to OMB is to obtain approval to continue the discussed information collection. States and service institutions participating in the CACFP will submit to FNS account and record information reflecting their efforts to comply with statutory and regulatory Program requirements. Examples of data collected and reported with this collection include, but are not limited to: applications and supporting documents; records of enrollment; records supporting the free and reduced price eligibility determinations; daily records indicating numbers of program participants in attendance and the number of meals served by type and category; and receipts, invoices and other records of CACFP costs and documentation of non-profit operation of food service.

This is a revision of a currently approved collection. It revises reporting burden as a result of increases in the number of sponsoring organizations and facilities, and an increase in the number of enrolled participants, who are required to submit information. It also adds a new requirement for written documentation when requesting substitutions for fluid milk or food components for participants with special non-disability, dietary needs. This requirement is added by the regulation *Child and Adult Care Food Program: Meal Pattern Revisions Related to the Healthy, Hunger-Free Kids Act of 2010,* published April 25, 2016 to 7 CFR 226.20 (g) *Exceptions and variations in reimbursable meals.*

This revision removes two reporting requirements that had been duplicated in the current burden estimate (*i.e.* counted twice), and one typed error in the number of day care home sponsors, which reduce the burden. Current OMB inventory for this collection consists of 2,234,840 hours. As a result of program changes and adjustments, program burden was increased slightly by 236,715 hours since last renewal. The average burden per response and the annual burden hours for reporting and recordkeeping are explained below and summarized in the charts which follow.

Affected Public: 56 State agencies, 21,052 Institutions, 180,740 facilities (includes 113,847, family day care homes and 66,893 sponsored center facilities) and 4,055,172 households.

Estimated Number of Respondents: 4,257,020.

Estimated Number of Responses per Respondent: 1.824365.

Estimated Total Annual Responses: 7,766,360.

Estimate Time per Response: 0.318238 hrs.

Estimated Total Annual Burden: 2,471,555 hrs.

Current OMB Inventory for Part 226: 2,234,840 hrs.

Difference (change in burden with this renewal): 236,715 hrs.

Refer to the table below for estimated total annual burden.

Affected public	Estimated number of respondents	Number of responses per respondent	Total annual responses	Estimated total hours per response	Estimated total burden
Reporting					
State Agencies	56	564.16	31,593	0.176	5,544.92
Sponsor/Institution	21,052	26.31	553,808	1.1136	616,697.18
Facility	180,740	12.00	2,168,880	0.407	883,761.00
Individual/Household	4,055,172	1.05	4,274,151	0.0830	354,827.55
Total Estimated Reporting Burden	4,257,020		7,028,432		1,860,830.66
Recordkeeping					
State Agencies	56	27.00	1,512	1.3704	2,072
Sponsor/Institution	21,052	9.22	194,196	0.3421	66,432
Facility	180,740	3.00	542,220	1.000	542,220
Total Estimated Recordkeeping Burden	201,848		737,928		610,724
Total of Reporting and Recordkeeping CACFP					
Reporting	4,257,020	1.6510	7,028,432	0.2647	1,860,831
Recordkeeping	201,848	3.6559	737,928	0.8276	610,724
Total	4,257,020		7,766,360		2,471,555

Dated: May 9, 2016.

Audrey Rowe,

Administrator, Food and Nutrition Service.

[FR Doc. 2016–11559 Filed 5–16–16; 8:45 am]

BILLING CODE 3410–30–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–32–2016]

Foreign-Trade Zone 110—Albuquerque, New Mexico; Application for Reorganization Under Alternative Site Framework

An application has been submitted to the Foreign-Trade Zones (FTZ) Board by the City of Albuquerque, New Mexico, grantee of FTZ 110, requesting authority to reorganize the zone under the alternative site framework (ASF) adopted by the FTZ Board (15 CFR 400.2(c)). The ASF is an option for grantees for the establishment or reorganization of zones and can permit significantly greater flexibility in the designation of new subzones or "usage-driven" FTZ sites for operators/users located within a grantee's "service area" in the context of the FTZ Board's standard 2,000-acre activation limit for a zone. The application was submitted pursuant to the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the Board (15 CFR part 400). It was formally docketed on May 10, 2016.

FTZ 110 was approved by the FTZ Board on October 30, 1984 (Board Order 279, 49 FR 44516, November 7, 1984) and expanded on March 29, 2002 (Board Order 1214, 67 FR 17048–17049, April 9, 2002).

The current zone includes the following site: *Site 1* (62 acres)—Albuquerque International Sunport Airport Complex, University and Spirit Drive, Albuquerque.

The grantee's proposed service area under the ASF would include all of Bernalillo, Sandoval, Santa Fe, Torrance, Socorro and Valencia Counties, New Mexico, as described in the application. If approved, the grantee would be able to serve sites throughout the service area based on companies' needs for FTZ designation. The application indicates that the proposed service area is within and adjacent to the Albuquerque, New Mexico U.S. Customs and Border Protection port of entry.

The applicant is requesting authority to reorganize its existing zone to include the existing site as a "magnet" site. The ASF allows for the possible exemption of one magnet site from the "sunset" time limits that generally apply to sites under the ASF, and the applicant proposes that Site 1 be so exempted. No subzones/usage-driven sites are being requested at this time. The application would have no impact on FTZ 110's previously authorized subzones.

In accordance with the FTZ Board's regulations, Christopher Kemp of the FTZ Staff is designated examiner to evaluate and analyze the facts and information presented in the application and case record and to report findings and recommendations to the FTZ Board.

Public comment is invited from interested parties. Submissions shall be addressed to the FTZ Board's Executive Secretary at the address below. The closing period for their receipt is July 18, 2016. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to August 1, 2016.

A copy of the application will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 21013, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230–0002, and in the "Reading Room" section of the FTZ Board's Web site, which is accessible via *www.trade.gov/ftz.* For further information, contact Christopher Kemp at *Christopher.Kemp@trade.gov* or (202) 482–0862.

Dated: May 10, 2016.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2016–11546 Filed 5–16–16; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–33–2016]

Foreign-Trade Zone (FTZ) 281—Miami, Florida, Notification of Proposed Production Activity, Alpha Marketing Network, Inc. d/b/a AMN Distributors, (Kitting—Wine Gift Sets), Miami, Florida

Miami-Dade County, grantee of FTZ 281, submitted a notification of proposed production activity to the FTZ Board on behalf of Alpha Marketing Network, Inc. d/b/a AMN Distributors (AMN), located in Miami, Florida. The notification conforming to the requirements of the regulations of the FTZ Board (15 CFR 400.22) was received on May 3, 2016.

The AMN facility is located within Site 41 of FTZ 281. The facility is used for the kitting of Irish cream wine gift sets. Pursuant to 15 CFR 400.14(b), FTZ activity would be limited to the specific foreign-status materials and components and specific finished products described in the submitted notification (as described below) and subsequently authorized by the FTZ Board.

Production under FTZ procedures could exempt AMN from customs duty payments on foreign status materials used in export production. On its domestic sales, AMN would be able to choose the duty rate during customs entry procedures that applies to finished Irish cream wine gift sets (4.2¢/liter) for the inputs noted below. Customs duties also could possibly be deferred or reduced on foreign status production equipment.

The components sourced from abroad include: Irish cream gift boxes/paper/master; drinking glasses; and, Irish cream wine (duty rate ranges from free to 28.5%; 4.2¢/liter).

Public comment is invited from interested parties. Submissions shall be addressed to the FTZ Board's Executive Secretary at the address below. The closing period for their receipt is June 27, 2016.

A copy of the notification will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 21013, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230–0002, and in the "Reading Room" section of the FTZ Board's Web site, which is accessible via *www.trade.gov/ftz.*

For further information, contact Pierre Duy at *Pierre.Duy@trade.gov* or (202) 482–1378.

Dated: May 10, 2016.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2016–11547 Filed 5–16–16; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–34–2016]

Foreign-Trade Zone (FTZ) 121—Albany, New York; Notification of Proposed Production Activity; Townsend Leather Company, Inc., (Finished Upholstery Grade Leather, Cut Parts and Product Samples); Johnstown, New York

The Capital District Regional Planning Commission, grantee of FTZ 121, submitted a notification of proposed production activity to the FTZ Board on behalf of Townsend Leather Company, Inc. (Townsend), located in Johnstown, New York. The notification conforming to the requirements of the regulations of the FTZ Board (15 CFR 400.22) was received on May 9, 2016.

The Townsend facility is located within Site 7 of FTZ 121. The facility is used to produce finished upholstery grade leather, cut parts and product samples. The products are used in aviation/motor vehicle/yacht interiors, interior design and fashion accessories. Pursuant to 15 CFR 400.14(b), FTZ activity would be limited to the specific foreign-status material and specific finished products described in the submitted notification (as described below) and subsequently authorized by the FTZ Board.

Production under FTZ procedures could exempt Townsend from customs duty payments on the foreign-status components used in export production. On its domestic sales, Townsend would be able to choose the duty rates during customs entry procedures that apply to finished upholstery grade leather, cut parts and product samples (duty rates range from free to 2.9%) for the foreign-status upholstery grade pearl crust leather hides (duty rate, 2.8%). Customs duties also could possibly be deferred or reduced on foreign-status production equipment.

Public comment is invited from interested parties. Submissions shall be addressed to the FTZ Board's Executive Secretary at the address below. The closing period for their receipt is June 27, 2016.

A copy of the notification will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 21013, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230–0002, and in the "Reading Room" section of the FTZ Board's Web site, which is accessible via *www.trade.gov/ftz.*

For further information, contact Diane Finver at *Diane.Finver@trade.gov* or (202) 482–1367.

Dated: May 10, 2016.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2016–11549 Filed 5–16–16; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XE612

Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Reef Fish Resources of the Gulf of Mexico; Amendment 41

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of Intent (NOI) to prepare a draft environmental impact statement (DEIS); request for comments.

SUMMARY: The NMFS Southeast Region in collaboration with the Gulf of Mexico Fishery Management Council (Council) intends to prepare a DEIS to describe and analyze a range of alternatives for management actions to be included in Amendment 41 to the Fishery Management Plan (FMP) for the Reef Fish Resources of the Gulf of Mexico (Amendment 41). Amendment 41 will consider management approaches for the harvest of red snapper from vessels with a Gulf Charter Vessel/Headboat Permit for Reef Fish that do not participate in the Southeast Region Headboat Survey. The purpose of this NOI is to solicit public comments on the scope of issues to be addressed in the DEIS.

DATES: Written comments on the scope of issues to be addressed in the DEIS will be accepted until June 16, 2016.

ADDRESSES: You may submit comments, identified by NOAA–NMFS–2016–0057, by either of the following methods:

- *Electronic submission:* Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to *www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2016-0057,* click the "Comment Now!" icon, complete the required fields, and enter or attach your comments.

- *Mail:* Submit written comments to Cynthia Meyer, NMFS Southeast Regional Office, 263 13th Avenue South, St. Petersburg, FL 33701.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on *www.regulations.gov* without change. All personal identifying information (*e.g.,* name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous).

FOR FURTHER INFORMATION CONTACT: Cynthia Meyer, NMFS Southeast Regional Office, telephone: 727–824–5305; or email: *cynthia.meyer@noaa.gov.*

SUPPLEMENTARY INFORMATION: The Council recently took action to provide more flexibility in managing the harvest of red snapper by the various components of the Gulf reef fish recreational sector. In 2014, the Council established separate private angling and Federal charter vessel/headboat (for-hire) components of the red snapper recreational sector. There has been a decrease over time in the proportion of red snapper harvested by anglers fishing from Federal for-hire vessels and differences in regulatory environments faced by Federal for-hire operators and private anglers. These factors contributed to the Council's decision to restructure the red snapper recreational sector to increase flexibility for each component.

The purpose of Amendment 41 is to develop a management approach for federally permitted Gulf reef fish charter vessels that reduces management uncertainty, provides flexibility and improves economic conditions for the owners and operators of Federal charter vessels, and increases opportunities for anglers who fish from Federal charter vessels to harvest red snapper.

NMFS, in collaboration with the Council, will develop a DEIS for Amendment 41 to describe and analyze alternatives to address the management needs described above, including the "no action" alternative. In accordance with the regulations issued by the Council on Environmental Quality (CEQ) for implementing the National Environmental Policy Act (NEPA; 40 CFR parts 1500–1508), NMFS, in collaboration with the Council, has identified preliminary environmental issues as a means to initiate discussion for scoping purposes only. These preliminary issues may not represent the full range of issues that eventually will be evaluated in the DEIS. A copy of the Amendment 41 draft options paper is available at: *http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/reef_fish/index.html.*

Comments on the scope of the DEIS may be submitted in writing to NMFS (see **ADDRESSES**) during the 30-day scoping period. After the scoping period and throughout the development of Amendment 41, the Council will accept written comments on the action, and oral comments may be made during the public testimony portion of any Council meeting. The upcoming Council meetings will be in Clearwater Beach, Florida on June 20–24, 2016, and New Orleans, Louisiana on August 15–19, 2016.

After the DEIS associated with Amendment 41 is completed, it will be filed with the Environmental Protection Agency (EPA). After filing, the EPA will publish a notice of availability of the DEIS for public comment in the **Federal Register**. Consistent with the CEQ regulations, the DEIS will have a 45-day public comment period.

The Council and NMFS will consider public comments received on the DEIS in developing the final environmental impact statement (FEIS) and before adopting final management measures for the amendment. NMFS will submit the consolidated final amendment and supporting FEIS to the Secretary of Commerce (Secretary) for review as required by the Magnuson-Stevens Fishery Conservation and Management Act.

NMFS will announce, through a notification in the **Federal Register**, the availability of the final amendment for public review during the Department of Commerce Secretarial review period and will consider all public comments. During Secretarial review, NMFS will also file the FEIS with the EPA, and the EPA will publish a notice of availability for the FEIS in the **Federal Register**. This public comment period is expected to be concurrent with the Secretarial review period and will end prior to final agency action to approve, disapprove, or partially approve the Amendment 41.

NMFS will announce, through a document published in the **Federal Register**, all public comment periods on the final amendment, its proposed implementing regulations, and the availability of its associated FEIS. NMFS will consider all public comments received during the Secretarial review period, whether they are on the final amendment, the proposed regulations, or the FEIS, prior to final agency action.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: May 11, 2016.

Emily H. Menashes,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2016–11574 Filed 5–16–16; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

[Docket No. 160509408–6408–01]

RIN 0660–XC026

Input on Proposals and Positions for 2016 World Telecommunication Standardization Assembly

AGENCY: National Telecommunications and Information Administration, U.S. Department of Commerce.

ACTION: Notice and request for public comment.

SUMMARY: The National Telecommunications and Information Administration (NTIA) seeks input from stakeholders and interested parties to help develop its proposals and positions regarding matters that will be addressed at the upcoming 2016 World Telecommunication Standardization Assembly (WTSA–2016) of the International Telecommunication Union (ITU), being held from October 25 to November 3, 2016. The results of this Notice and Request for Public Comment will be reflected in NTIA's recommendations for U.S. proposals and positions to the U.S. Department of State, which is coordinating the WTSA–2016 preparatory process.

DATES: Comments are due on or before June 16, 2016.

ADDRESSES: Written comments may be submitted by mail to Vernita D. Harris, Deputy Associate Administrator, Office of International Affairs, National Telecommunications and Information Administration, 1401 Constitution Avenue NW., Room 4701, Washington, DC 20230. Comments may also be submitted electronically to *vharris@ntia.doc.gov* or to *WTSA2016@ntia.doc.gov.* Comments provided electronically should be submitted in a text searchable format using standard Microsoft Word or Adobe PDF. Comments will be posted to NTIA's Web site at *https://www.ntia.doc.gov/federal-register-notice/2016/wtsa16-rfc-comments.*

FOR FURTHER INFORMATION CONTACT: For questions about this Notice contact: Vernita D. Harris, Deputy Associate Administrator, Office of International Affairs, National Telecommunications and Information Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW., Room 4701, Washington, DC 20230; telephone: (202) 482–4686; email: *vharris@ntia.doc.gov.* Please direct media inquiries to the Office of Public Affairs, NTIA, at (202) 482–7002.

SUPPLEMENTARY INFORMATION:

Background: The WTSA, which occurs every four years, sets the overall strategic direction and activities for upcoming ITU Telecommunication Standardization Sector (ITU–T) work; defines the general policy for the ITU–T; approves, modifies or rejects ITU–T Standards (known as "recommendations"); and establishes the structure for the ITU–T study groups, approves their expected work program for the next four-year period, and appoints their Chairmen and Vice-Chairmen. The next WTSA conference will be held from October 25 to November 3, 2016, in Yasmine Hammamet, Tunisia. Participants historically include ministers, ambassadors, government delegates, regional and international organizations, and representatives from academia, civil society, and the private sector.

The U.S. Department of State initiated U.S. preparations for WTSA–2016 in January 2016, which are focused on developing formal U.S. priorities for WTSA–2016.[1]

NTIA, as the principal adviser to the President on telecommunications and information policy, seeks input from stakeholders and other interested parties to develop its recommendations to the U.S. Department of State and to inform any NTIA delegates who will attend the WTSA. NTIA's participation in the U.S. WTSA–2016 preparatory process is intended to ensure that U.S. proposals and positions support the nation's telecommunications, converged communications infrastructure, information and technology policies to promote economic growth and digital innovation, and do not duplicate the standards development processes of other bodies.

Discussion: There are numerous standards organizations and fora around the globe focused on various aspects of telecommunication and information policies. No single organization can cover all ground, nor should it try or claim to do so.

The purpose of this Notice and Request for Public Comment is to seek input from stakeholders and other interested parties to share their perspectives as to whether and how the work of the ITU–T results in standards that meet their needs. We are interested in particular on input related to ITU–T restructuring and work methods and rules of procedure.

Questions for Public Comment

NTIA requests comment on the questions below. NTIA also welcomes input and comments on any specific issues being advanced by other countries, private sector organizations, and stakeholders for WTSA–2016.

(1) Are there overarching objectives and priorities that the U.S. delegation should adopt for WTSA–2016 and the ITU–T? What is the best way for the U.S. delegation to advance and ultimately achieve these objectives and priorities?

(2) In an environment with a wide range of industry led, multistakeholder standards development organization (SDOs) leading the development of telecommunications and information standards, does an intergovernmental organization, such as the ITU, provide any unique value? How does ITU involvement in global standards development influence, or affect U.S. industry interests in engaging in and promoting the international digital economy?

(3) What do you believe is the percentage of participation of relevant organizations or companies in the ITU–T study groups? What is the value of this participation in the ITU–T study groups? Does this participation meeting the needs of relevant organizations or companies?

(4) Is there a wide implementation of the ITU–T recommendations in the United States or elsewhere by relevant organizations or companies? Why or why not? Can you provide examples of these implementations, if any?

(5) The WTSA–12 Action Plan (see *https://www.ntia.doc.gov/files/ntia/WTSA16/WTSA-12-Action-Plan.pdf*) identified issues that will be discussed during WTSA–2016. Which of these issues are the most important to focus on in the upcoming WTSA–2016? What positions should be taken with respect to these issues?

(6) Are the ITU–T work methods and/or rules of procedure effective? Why or why not? What, if any, modifications to ITU–T Resolutions and Recommendations (see *https://www.ntia.doc.gov/page/wtsa-12-resolutions-and-opinions*) or to the ITU–T working methods or rules of procedure would you recommend to improve efficiency and effectiveness? Are there structural changes to the ITU–T that could make the organization more relevant?

(7) What are the most important international standardization public policy issues and topics? And why? In what areas or subjects do you believe the ITU–T has a particular role or expertise?

(8) Assuming the ITU–T study group structure remains as it is today, in which study groups and activities should NTIA prioritize its participation and why?

(9) How could cooperation and collaboration between ITU–T and other SDOs be strengthened? How could cooperation and collaboration among the three ITU sectors be strengthened?

(10) The ITU and its membership have identified a standardization gap between developed and developing countries and a need to bridge that gap to ensure greater participation by all countries in the work of the ITU–T. What is the best way to address this gap? Would ITU programs on this topic be better placed within the ITU–D or the ITU–T? What other steps can be taken to bridge this gap?

NTIA invites comment on the questions set forth in this Notice and Request for Public Comment as well as input on any other issues relevant to NTIA's participation in the ITU–T that will assist NTIA in its consultations with the U.S. Department of State and other U.S. government agencies in preparation for WTSA–2016.

Dated: May 12, 2016.

Lawrence E. Strickling,

Assistant Secretary for Communications and Information.

[FR Doc. 2016–11609 Filed 5–16–16; 8:45 am]

BILLING CODE 3510–60–P

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Determination Under the Textile and Apparel Commercial Availability Provision of the Dominican Republic-Central America-United States Free Trade Agreement ("CAFTA–DR Agreement")

AGENCY: The Committee for the Implementation of Textile Agreements.

ACTION: Determination to add a product in unrestricted quantities to Annex 3.25 of the CAFTA–DR Agreement.

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[1] *See* Department of State, *Notice of Meeting of the International Telecommunication Advisory Committee and Preparations for Upcoming International Communications and Information Policy Meetings,* Public Notice: 9399, 81 FR 847 (Jan. 7, 2016).

SUMMARY: The Committee for the Implementation of Textile Agreements ("CITA") has determined that certain warp stretch woven rayon blend fabrics, as specified below, are not available in commercial quantities in a timely manner in the CAFTA–DR countries. The product will be added to the list in Annex 3.25 of the CAFTA–DR Agreement in unrestricted quantities.

DATES: Effective May 17, 2016.

FOR FURTHER INFORMATION CONTACT: Maria Goodman, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–3651.

FOR FURTHER INFORMATION ON-LINE: *http://web.ita.doc.gov/tacgi/CaftaReqTrack.nsf* under "Approved Requests," Reference number: 199.2016.04.12.Fabric.GDLSKforTangTextiles.

SUPPLEMENTARY INFORMATION:

Authority: The CAFTA–DR Agreement; Section 203(o)(4) of the Dominican Republic-Central America-United States Free Trade Agreement Implementation Act ("CAFTA–DR Implementation Act"), Public Law 109–53; the Statement of Administrative Action, accompanying the CAFTA–DR Implementation Act; and Presidential Proclamations 7987 (February 28, 2006) and 7996 (March 31, 2006).

Background: The CAFTA–DR Agreement provides a list in Annex 3.25 for fabrics, yarns, and fibers that the Parties to the CAFTA–DR Agreement have determined are not available in commercial quantities in a timely manner in the territory of any Party. The CAFTA–DR Agreement provides that this list may be modified pursuant to Article 3.25.4 and 3.25.5, when the President of the United States determines that a fabric, yarn, or fiber is not available in commercial quantities in a timely manner in the territory of any Party. *See* Annex 3.25 of the CAFTA–DR Agreement; *see also* section 203(o)(4)(C) of the CAFTA–DR Implementation Act.

The CAFTA–DR Implementation Act requires the President to establish procedures governing the submission of a request and providing opportunity for interested entities to submit comments and supporting evidence before a commercial availability determination is made. In Presidential Proclamations 7987 and 7996, the President delegated to CITA the authority under section 203(o)(4) of CAFTA–DR Implementation Act for modifying the Annex 3.25 list. Pursuant to this authority, on September 15, 2008, CITA published modified procedures it would follow in considering requests to modify the Annex 3.25 list of products determined to be not commercially available in the territory of any Party to CAFTA–DR (*Modifications to Procedures for Considering Requests Under the Commercial Availability Provision of the Dominican Republic-Central America-United States Free Trade Agreement,* 73 FR 53200) ("CITA's procedures").

On April 12, 2016, the Chairman of CITA received a request for a Commercial Availability determination ("Request") from Grunfeld, Desiderio, Lebowitz, Silverman, & Klestadt, LLC, on behalf of Tang Textiles & Apparel, for certain warp stretch woven rayon blend fabrics. On April 14, 2016, in, in accordance with CITA's procedures, CITA notified interested parties of the Request, which was posted on the dedicated Web site for CAFTA–DR Commercial Availability proceedings. In its notification, CITA advised that any Response with an Offer to Supply ("Response") must be submitted by April 26, 2016, and any Rebuttal Comments to a Response must be submitted by May 2, 2016, in accordance with sections 6 and 7 of CITA's procedures. No interested entity submitted a Response to the Request advising CITA of its objection to the Request and its ability to supply the subject product.

In accordance with section 203(o)(4)(C) of the CAFTA–DR Implementation Act, and section 8(c)(2) of CITA's procedures, as no interested entity submitted a Response objecting to the Request and providing an offer to supply the subject product, CITA has determined to add the specified fabric to the list in Annex 3.25 of the CAFTA–DR Agreement.

The subject product has been added to the list in Annex 3.25 of the CAFTA–DR Agreement in unrestricted quantities. A revised list has been posted on the dedicated Web site for CAFTA–DR Commercial Availability proceedings.

Specifications: Certain Warp Stretch Woven Rayon Blend Fabrics

Fabric #1: Warp Stretch Woven Rayon/Nylon/Spandex Fabric

HTS classifications: 5516.22.00, 5516.23.00, 5516.24.00
Fiber Content: Rayon: 67–80%; Nylon: 15–35%; Spandex: 2–6%
Yarn Configuration:
  Warp—Nylon filament combined with Spandex filament;
  Filling—Rayon staple
Yarn Denier: Nylon and Spandex of various deniers.
Width: Metric: 139–153cm; (English: 55–60 inches)
Weight: Metric: 220–315 grams per square meter
Thread Count (Density):
  Metric: 30–74 ends per cm (warp) x 27–38 picks per cm (filling)
  English: 76–185 ends per inch (warp) x 70–95 picks per inch (filling)
Weave type: Various weaves
Finish/Processing: Of yarns of different colors and/or piece dyed and/or printed.

Fabric # 2: Warp Stretch Woven Rayon/Polyester/Nylon/Spandex Fabric

HTS classifications: 5407.10.00, 5407.92.20, 5407.93.20, 5407.94.20, 5516.22.00, 5516.23.00, 5516.24.00;
Fiber Content: Rayon: 30–70%; Polyester: 20–52%; Nylon: 9–35%; Spandex: 2–6%
Yarn Configuration:
  Warp—Nylon filament, Polyester filament & Spandex filament;
  Filling—Rayon staple combined with Polyester filament
Yarn Denier: Nylon, Polyester and Spandex of various deniers.
Width: Metric: 139–153cm; (English: 55–60 inches)
Weight: Metric: 220–315 grams per square meter
Thread Count (Density):
  Metric: 30–48 ends per cm (warp) x 27–40 picks per cm (filling)
  English: 76–120 ends per inch (warp) x 70–100 picks per inch (filling)
Weave type: Various weaves
Finish/Processing: Of yarns of different colors and/or piece dyed and/or printed.

Joshua Teitelbaum,

Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 2016–11617 Filed 5–16–16; 8:45 am]

BILLING CODE 3510–DR–P

BUREAU OF CONSUMER FINANCIAL PROTECTION

Academic Research Council Meeting

AGENCY: Bureau of Consumer Financial Protection.

ACTION: Notice of public meeting.

SUMMARY: This notice sets forth the announcement of a public meeting of the Academic Research Council (ARC or Council) of the Consumer Financial Protection Bureau (Bureau). The notice also describes the functions of the Council. Notice of the meeting is permitted by section 8 of the ARC Charter. Specifically, section 8(d) of the ARC Charter states:

> The Council will convene in person from time to time at the call of the Assistant Director or the Assistant Director's designee, but at a minimum shall meet annually. Council members may also make additional

visits to the Bureau or participate in additional meetings for educational or other research-related purposes.

DATES: The meeting date is Friday, May 20, 2016, 9 a.m. to 11 a.m. eastern time.

ADDRESSES: The meeting location is Consumer Financial Protection Bureau, 1275 First Street NE., Washington, DC 20002.

FOR FURTHER INFORMATION CONTACT: Jassmine Okiemen, Research Assistant, Academic Research Council, Office of Research, Consumer Financial Protection Bureau, at *CFPB_AcademicResearchCouncil@cfpb.gov*, or 202–435–9607.

SUPPLEMENTARY INFORMATION:

I. Background

Section 1013(b)(1) of the Consumer Financial Protection Act, 12 U.S.C. 5493(b)(1) establishes the Office of Research (OR) and assigns to it the responsibility of researching, analyzing, and reporting on topics relating to the Bureau's mission, including developments in markets for consumer financial products and services, consumer awareness, and consumer behavior.

The Academic Research Council is a consultative body comprised of scholars that help the Office of Research perform these responsibilities. Section 3 of the ARC Charter states: "The Council will provide the Office of Research advice and feedback on research methodologies, framing research questions, data collection, and analytic strategies. Additionally, the Council will provide both backward- and forward-looking feedback on the Office of Research's research work and will offer input into its research strategic planning process and research agenda."

II. Agenda

The Academic Research Council will discuss methodology and direction for consumer finance research at the Bureau.

Persons who need a reasonable accommodation to participate should contact *CFPB_504Request@cfpb.gov*, 202–435–9EEO, 1–855–233–0362, or 202–435–9742 (TTY) prior to the meeting or event to request assistance. The request must identify the date, time, location, and title of the meeting or event, the nature of the assistance requested, and contact information for the requester. CFPB will strive to provide but cannot guarantee that accommodation will be provided for late requests.

Individuals who wish to attend the Academic Research Council meeting must RSVP to *CFPB_AcademicResearchCouncil@cfpb.gov* by noon, May 18, 2016. Members of the public must RSVP by the due date and must include "ARC" in the subject line of the RSVP.

III. Availability

The Council's agenda will be made available to the public on May 10, 2016, via *www.consumerfinance.gov*. Individuals should express in their RSVP if they require a paper copy of the agenda.

Dated: May 4, 2016.

Christopher D'Angelo,

Chief of Staff, Bureau of Consumer Financial Protection.

[FR Doc. 2016–11614 Filed 5–16–16; 8:45 am]

BILLING CODE 4810–AM–P

DEPARTMENT OF DEFENSE

Department of the Air Force

U.S. Air Force Academy Board of Visitors Notice of Meeting

AGENCY: U.S. Air Force Academy Board of Visitors.

ACTION: Meeting notice.

SUMMARY: In accordance with 10 U.S.C. Section 9355, the U.S. Air Force Academy (USAFA) Board of Visitors (BoV) will hold a meeting at the Rayburn House Office Building, Gold Room 2168, Washington, DC, on June 9, 2016. On Thursday, the meeting will begin at 8:30 a.m. and will conclude at 3:45 p.m. The purpose of this meeting is to review morale and discipline, social climate, strategic communications, and other matters relating to the Academy. Specific topics for this meeting include a Superintendent's Update; USAFA Diversity Update; and Strategic Communications. Public attendance at this USAFA BoV meeting shall be accommodated on a first-come, first-served basis up to the reasonable and safe capacity of the meeting room. In addition, any member of the public wishing to provide input to the USAFA BoV should submit a written statement in accordance with 41 CFR Section 102–3.140(c) and section 10(a)(3) of the Federal Advisory Committee Act and the procedures described in this paragraph. Written statements must address the following details: The issue, discussion, and a recommended course of action. Supporting documentation may also be included as needed to establish the appropriate historical context and provide any necessary background information. Written statements can be submitted to the Designated Federal Officer (DFO) at the Air Force address detailed below at any time. However, if a written statement is not received at least 10 calendar days before the first day of the meeting which is the subject of this notice, then it may not be provided to or considered by the BoV until its next open meeting. The DFO will review all timely submissions with the BoV Chairman and ensure they are provided to members of the BoV before the meeting that is the subject of this notice. If after review of timely submitted written comments and the BoV Chairman and DFO deem appropriate, they may choose to invite the submitter of the written comments to orally present the issue during an open portion of the BoV meeting that is the subject of this notice. Members of the BoV may also petition the Chairman to allow specific personnel to make oral presentations before the BoV. In accordance with 41 CFR Section 102–3.140(d), any oral presentations before the BoV shall be in accordance with agency guidelines provided pursuant to a written invitation and this paragraph. Direct questioning of BoV members or meeting participants by the public is not permitted except with the approval of the DFO and Chairman. For the benefit of the public, rosters that list the names of BoV members and any releasable materials presented during the open portions of this BoV meeting shall be made available upon request.

Contact Information: For additional information or to attend this BoV meeting, contact Lt Col Veronica Senia, Chief, Officer Accessions and Training, AF/A1PT, 1040 Air Force Pentagon, Washington, DC 20330, (703) 692–5577, *Veronica.V.Senia.mil@mail.mil*.

Henry Williams,

Acting Air Force Federal Register Liaison Officer.

[FR Doc. 2016–11568 Filed 5–16–16; 8:45 am]

BILLING CODE 5001–10–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Docket ID: DOD–2016–OS–0058]

Proposed Collection; Comment Request

AGENCY: Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs, DoD.

ACTION: Notice.

SUMMARY: In compliance with the *Paperwork Reduction Act of 1995*, the Office of the Assistant Secretary of Defense for Manpower and Reserve

Affairs announces a proposed public information collection and seeks public comment on the provisions thereof. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

DATES: Consideration will be given to all comments received by July 18, 2016.

ADDRESSES: You may submit comments, identified by docket number and title, by any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Department of Defense, Office of the Deputy Chief Management Officer, Directorate for Oversight and Compliance, 4800 Mark Center Drive, Mailbox #24, Alexandria, VA 22350–1700.

Instructions: All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at *http://www.regulations.gov* as they are received without change, including any personal identifiers or contact information.

Any associated form(s) for this collection may be located within this same electronic docket and downloaded for review/testing. Follow the instructions at *http://www.regulations.gov* for submitting comments. Please submit comments on any given form identified by docket number, form number, and title.

FOR FURTHER INFORMATION CONTACT: To request more information on this proposed information collection or to obtain a copy of the proposal and associated collection instruments, please write to Rajeev Ramchand, RAND Corporation, 1100 South Hayes Street, Arlington, VA 22202, or call (703) 413–1100 ext. 5096.

SUPPLEMENTARY INFORMATION:

Title; Associated Form; and OMB Number: Improving Caregiver Outcomes through Structured Support Via Military Caregiver Peer Forums; OMB Control Number 0704–XXXX.

Needs and Uses: The information collection requirement is necessary to assess how participants are using the Military Caregiver PEER (Personalized Experiences, Engagement and Resources) Forums, how participating in the PEER Forums benefits them, and the role that PEER Forums play in the landscape of social support services available to caregivers. Military Caregiver PEER Forums are located on military bases across the country where caregivers can convene, converse among their peers, share resources and best practices, and provide support for the challenges they face. The results will be used to determine how the PEER Forums are currently improving and might better continue to improve caregiver well-being by reducing caregiver burden and addressing caregiver isolation. DoD will use the information gathered by this project to assess the implementation of PEER Forums and implement improvements, if needed. A complementary objective is to use the information gathered by this project to provide DoD with a framework for ongoing monitoring and evaluation of PEER Forums.

Affected Public: Business or other for profit; Not-for-profit institutions.

Annual Burden Hours: 95.

Number of Respondents: 95.

Responses per Respondent: 1.

Annual Responses: 95.

Average Burden per Response: 60 minutes.

Frequency: One-time.

Respondents are: Administrators who oversee the PEER forums, Recovery Care Coordinators who refer caregivers to the PEER forums, Military and Family Life Counselors who run the PEER forums, and caregivers who have been referred to participate in the PEER forums.

Dated: May 12, 2016.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2016–11625 Filed 5–16–16; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2016–ICCD–0058]

Agency Information Collection Activities; Comment Request; Impact Aid Program Application for Section 7002 Assistance

AGENCY: Office of Elementary and Secondary Education (OESE), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before July 18, 2016.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use *http://www.regulations.gov* by searching the Docket ID number ED–2016–ICCD–0058. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room 2E–115, Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Amanda Ognibene, 202–453–6637.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Impact Aid Program Application for Section 7002 Assistance.

OMB Control Number: 1810–0036.

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 250.

Total Estimated Number of Annual Burden Hours: 375.

Abstract: The U.S. Department of Education is requesting an extension for the Application for Assistance under section 7002 of title VII of the Elementary and Secondary Education Act (ESEA). This application is for a grant program otherwise known as Impact Aid Payments for Federal Property. Local Educational Agencies (LEAs) that have lost taxable property due to Federal activities request financial assistance by completing an annual application. Please note that this formula grant program was previously authorized under title VIII of the ESEA (as amended), but will move to title VII under the Every Student Succeeds Act, which reauthorized the ESEA, effective for FY 2017. Regulations for section 7002 of the Impact Aid Program are found at 34 CFR 222, subpart B.

Dated: May 12, 2016.

Tomakie Washington,

Acting Director, Information Collection Clearance Division, Office of the Chief Privacy Officer, Office of Management.

[FR Doc. 2016–11589 Filed 5–16–16; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Indian Education Discretionary Grants Programs—Professional Development Grants Program

AGENCY: Office of Elementary and Secondary Education, Department of Education.

ACTION: Notice.

Overview Information

Indian Education Discretionary Grants Programs—Professional Development Grants Program.

Notice inviting applications for new awards for fiscal year (FY) 2016.

Catalog of Federal Domestic Assistance (CFDA) Number: 84.299B.

DATES:

Applications Available: May 17, 2016.

Deadline for Transmittal of Applications: July 1, 2016.

Deadline for Intergovernmental Review: August 30, 2016.

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The purposes of the Indian Education Professional Development Grants program are to (1) increase the number of qualified Indian individuals in professions that serve Indians; (2) provide training to qualified Indian individuals to become teachers, administrators, teacher aides, social workers, and ancillary educational personnel; and (3) improve the skills of qualified Indian individuals who serve in the education field.

Priorities: This competition contains two absolute priorities and three competitive preference priorities. In accordance with 34 CFR 75.105(b)(2)(ii), these priorities are from the regulations for this program (34 CFR 263.5).

Absolute Priorities: For FY 2016 and any subsequent year in which we make awards from the list of unfunded applications from this competition, these priorities are absolute priorities. Under 34 CFR 75.105(c)(3) we consider only applications that meet one or both of these priorities.

These priorities are:

Absolute Priority 1: Pre-Service Training for Teachers

Projects that—

(i) Provide support and training to Indian individuals to complete a pre-service education program before the end of the award period that enables the individuals to meet the requirements for full State certification or licensure as a teacher through—

(A) Training that leads to a degree in education;

(B) For States allowing a degree in a specific subject area, training that leads to a degree in the subject area; or

(C) Training in a current or new specialized teaching assignment that requires a degree and in which a documented teacher shortage exists;

(ii) Provide one year of induction services, during the award period, to participants after graduation, certification, or licensure, while they are completing their first year of work as teachers in schools with significant Indian student populations; and

(iii) Include goals for the—

(A) Number of participants to be recruited each year;

(B) Number of participants to continue in the project each year;

(C) Number of participants to graduate each year; and

(D) Number of participants to find qualifying jobs within twelve months of completion.

Absolute Priority 2: Pre-Service Administrator Training

Projects that—

(i) Provide support and training to Indian individuals to complete a graduate degree in education administration that is provided before the end of the award period and that allows participants to meet the requirements for State certification or licensure as an education administrator;

(ii) Provide one year of induction services, during the award period, to participants after graduation, certification, or licensure, while they are completing their first year of work as administrators in schools with significant Indian student populations; and

(iii) Include goals for the—

(A) Number of participants to be recruited each year;

(B) Number of participants to continue in the project each year;

(C) Number of participants to graduate each year; and

(D) Number of participants to find qualifying jobs within twelve months of completion.

Competitive Preference Priorities: For FY 2016 and any subsequent year in which we make awards from the list of unfunded applications from this competition, these priorities are competitive preference priorities. Under 34 CFR 75.105(c)(2)(ii) we award an additional five points to an application that meets Competitive Preference Priority 1, an additional five points to an application that meets Competitive Preference Priority 2, and an additional three points to an application that meets Competitive Preference Priority 3.

These priorities are:

Competitive Preference Priority 1 (Five Additional Points)

An application that includes a letter of support signed by the authorized representative of a local educational agency (LEA) or Department of the Interior Bureau of Indian Education-funded school or other entity in the applicant's service area that agrees to consider program graduates for qualifying employment.

Competitive Preference Priority 2 (Five Additional Points)

An application submitted by an Indian tribe, Indian organization, or Indian institution of higher education (Indian IHE) that is eligible to participate in the Professional Development program. A consortium application of eligible entities that meets the requirements of 34 CFR 75.127 through 75.129 and includes an

Indian tribe, Indian organization, or Indian IHE will be considered eligible to receive preference under this priority only if the lead applicant for the consortium is the Indian tribe, Indian organization, or Indian IHE. In order to be considered a consortium application, the application must include the consortium agreement, signed by all parties.

Competitive Preference Priority 3 (Three Additional Points)

A consortium application of eligible entities whose lead is non-tribal that—

(i) Meets the requirements of 34 CFR 75.127 through 75.129 and includes an Indian tribe, Indian organization, or Indian IHE; and

(ii) Is not eligible to receive a preference under Competitive Preference Priority 2.

Statutory Hiring Preference

(a) Awards that are primarily for the benefit of Indians are subject to the provisions of section 7(b) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93–638). That section requires that, to the greatest extent feasible, a grantee—

(1) Give to Indians preferences and opportunities for training and employment in connection with the administration of the grant; and

(2) Give to Indian organizations and to Indian-owned economic enterprises, as defined in section 3 of the Indian Financing Act of 1974 (25 U.S.C. 1452(e)), preference in the award of contracts in connection with the administration of the grant.

(b) For purposes of this section, an Indian is a member of any federally recognized Indian tribe.

Program Authority: 20 U.S.C. 7442.

Applicable Regulations: (a) The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 75, 77, 79, 81, 82, 84, 86, 97, 98, and 99. (b) The Office of Management and Budget Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement) in 2 CFR part 180, as adopted and amended as regulations of the Department in 2 CFR part 3485. (c) The Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in 2 CFR part 200, as adopted and amended as regulations of the Department in 2 CFR part 3474. (d) The regulations for this program in 34 CFR part 263.

Note: The regulations in 34 CFR part 79 apply to all applicants except federally recognized Indian tribes.

Note: The regulations in 34 CFR part 86 apply to institutions of higher education only.

Note: On April 22, 2015, the Department amended regulations including 34 CFR 263.1 through 263.12 (80 FR 22403). We encourage applicants to read closely the amended regulations, particularly as they relate to payback requirements, payback reporting requirements, and grantee post-award requirements. We also have included the text of these regulations in the application package.

II. Award Information

Type of Award: Discretionary grants.

Estimated Available Funds: $6,000,000.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2017 from the list of unfunded applications from this competition.

Estimated Range of Awards: $300,000–$400,000.

Estimated Average Size of Awards: $350,000.

Maximum Award: We will reject any application that proposes a budget exceeding $400,000 for the first, second, or third 12-month budget period. The last 12-month budget period of a 48-month award will be limited to induction services only, at a cost not to exceed $90,000.

Estimated Number of Awards: 18.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 48 months.

III. Eligibility Information

1. Eligible Applicants

(a) An applicant must be an eligible entity which means—

(1) An institution of higher education, including an Indian IHE;

(2) A State educational agency in consortium with an institution of higher education;

(3) An LEA in consortium with an institution of higher education;

(4) An Indian tribe or Indian organization in consortium with an institution of higher education; or

(5) A Bureau of Indian Education (Bureau)-funded school.

(b) Bureau-funded schools are eligible applicants for—

(1) An in-service training program; and

(2) A pre-service training program when the Bureau-funded school applies in consortium with an institution of higher education that is accredited to provide the coursework and level of degree required by the project.

(c) Eligibility of an applicant requiring a consortium with an institution of higher education, including Indian IHEs, requires that the institution of higher education be accredited to provide the coursework and level of degree required by the project.

An applicant applying as an Indian organization must demonstrate that the entity meets the definition of "Indian organization" in 34 CFR 263.3. "Indian organization" means an organization that—

(1) Is legally established—

(i) By tribal or inter-tribal charter or in accordance with State or tribal law; and

(ii) With appropriate constitution, by-laws, or articles of incorporation;

(2) Includes in its purposes the promotion of the education of Indians;

(3) Is controlled by a governing board, the majority of which is Indian;

(4) If located on an Indian reservation, operates with the sanction or by charter of the governing body of that reservation;

(5) Is neither an organization or subdivision of, nor under the direct control of, any institution of higher education; and

(6) Is not an agency of State or local government.

The term "Indian institution of higher education" means an accredited college or university within the United States cited in section 532 of the Equity in Educational Land–Grant Status Act of 1994 (7 U.S.C. 301 note), any other institution that qualifies for funding under the Tribally Controlled College or University Assistance Act of 1978 (25 U.S.C. 1801 *et seq.*), and Diné College (formerly Navajo Community College) authorized in the Navajo College Assistance Act of 1978 (25 U.S.C. 640a *et seq.*).

2. *Cost Sharing or Matching:* This program does not require cost sharing or matching.

3. *Other:* Projects funded under this competition are encouraged to budget for a two-day Project Directors' meeting in Washington, DC during each year of the project period.

IV. Application and Submission Information

1. *Address to Request Application Package:* You can obtain an application package via the Internet or from the Education Publications Center (ED Pubs). To obtain a copy via the Internet, use the following address: *www.ed.gov/fund/grant/apply/grantapps/index.html.* To obtain a copy from ED Pubs, write, fax, or call the following: ED Pubs, U.S. Department of Education, P.O. Box 22207, Alexandria, VA 22304. Telephone, toll free: 1–877–433–7827. FAX: (703) 605–6794. If you use a

telecommunications device for the deaf (TDD) or a text telephone (TTY), call, toll free: 1–877–576–7734.

You can contact ED Pubs at its Web site, also: *www.EDPubs.gov* or at its email address: *edpubs@inet.ed.gov.*

If you request an application from ED Pubs, be sure to identify this program or competition as follows: CFDA number 84.299B.

Individuals with disabilities can obtain a copy of the application package in an accessible format (*e.g.*, braille, large print, audiotape, or compact disc) by contacting the person listed under *Accessible Format* in section VIII of this notice.

2. a. *Content and Form of Application Submission:* Requirements concerning the content of an application, together with the forms you must submit, are in the application package for this competition.

Page Limit: The application narrative is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. The suggested page limit for the application narrative is no more than 35 pages, using the following standards:

- A "page" is 8.5″ x 11″, on one side only, with 1″ margins at the top, bottom, and both sides.
- Double space all text in the application narrative, including titles, headings, footnotes, quotations, references, and captions, as well as all text in charts, tables, figures, and graphs.
- Use a font that is either 12 point or larger or no smaller than 10 pitch (characters per inch).
- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial.

The suggested page limit does not apply to the cover sheet; the budget section, including the budget narrative justification; the assurances and certifications; or the abstract, table of contents, the resumes, the bibliography, letters of support, or the signed consortium agreement, if applicable.

b. *Submission of Proprietary Information:* Given the types of projects that may be proposed in applications for the Indian Education Professional Development Grants program, your application may include business information that you consider proprietary. In 34 CFR 5.11 we define "business information" and describe the process we use in determining whether any of that information is proprietary and, thus, protected from disclosure under Exemption 4 of the Freedom of Information Act (5 U.S.C. 552, as amended).

Because we plan to make successful applications available to the public by posting them on our Web site, you may wish to request confidentiality of business information. Consistent with Executive Order 12600, please designate in your application any information that you believe is exempt from disclosure under Exemption 4. In the appropriate Appendix section of your application, under "Other Attachments Form," please list the page number or numbers on which we can find this information. For additional information please see 34 CFR 5.11(c).

3. *Submission Dates and Times:*

Applications Available: May 17, 2016.

Deadline for Transmittal of Applications: July 1, 2016.

Applications for grants under this competition must be submitted electronically using *Grants.gov.* For information (including dates and times) about how to submit your application electronically, or in paper format by mail or hand delivery if you qualify for an exception to the electronic submission requirement, please refer to *Other Submission Requirements* in section IV of this notice.

We do not consider an application that does not comply with the deadline requirements.

Individuals with disabilities who need an accommodation or auxiliary aid in connection with the application process should contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice. If the Department provides an accommodation or auxiliary aid to an individual with a disability in connection with the application process, the individual's application remains subject to all other requirements and limitations in this notice.

Deadline for Intergovernmental Review: August 30, 2016.

4. *Intergovernmental Review:* This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. Information about Intergovernmental Review of Federal Programs under Executive Order 12372 is in the application package for this competition.

5. *Funding Restrictions:* We specify allowable costs in 34 CFR 263.4.

A Professional Development program may include, as training costs, assistance to—

(1) Fully finance a student's educational expenses including tuition, books, and required fees; health insurance required by the institution of higher education; stipend; dependent allowance; technology costs; program required travel; and instructional supplies; or

(2) Supplement other financial aid, including Federal funding other than loans, for meeting a student's educational expenses.

The maximum stipend amount is $1,800 per month for full-time students; grantees may also provide participants with a $300 allowance per month per dependent during an academic term. The Department will reduce any stipends in excess of this amount. The terms "stipend," "full-time student," and "dependent allowance" are defined in 34 CFR 263.3. Stipends may be paid only to full-time students.

Other costs that a Professional Development program may include, but that must not be included as training costs, include costs for—

(1) Collaborating with prospective employers within the grantees' local service area to create a pool of potentially available qualifying employment opportunities;

(2) In-service training activities such as providing mentorship linking experienced teachers at job placement sites with program participants; and

(3) Assisting participants in identifying and securing qualified employment opportunities in their fields of study following completion of the program.

We reference additional regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

6. *Data Universal Numbering System Number, Taxpayer Identification Number, and System for Award Management:* To do business with the Department of Education, you must—

a. Have a Data Universal Numbering System (DUNS) number and a Taxpayer Identification Number (TIN);

b. Register both your DUNS number and TIN with the System for Award Management (SAM) (formerly the Central Contractor Registry), the Government's primary registrant database;

c. Provide your DUNS number and TIN on your application; and

d. Maintain an active SAM registration with current information while your application is under review by the Department and, if you are awarded a grant, during the project period.

You can obtain a DUNS number from Dun and Bradstreet at the following Web site: *http://fedgov.dnb.com/webform.* A DUNS number can be created within one to two business days.

If you are a corporate entity, agency, institution, or organization, you can obtain a TIN from the Internal Revenue

Service. If you are an individual, you can obtain a TIN from the Internal Revenue Service or the Social Security Administration. If you need a new TIN, please allow two to five weeks for your TIN to become active.

The SAM registration process can take approximately seven business days, but may take upwards of several weeks, depending on the completeness and accuracy of the data you enter into the SAM database. Thus, if you think you might want to apply for Federal financial assistance under a program administered by the Department, please allow sufficient time to obtain and register your DUNS number and TIN. We strongly recommend that you register early.

Note: Once your SAM registration is active, it may be 24 to 48 hours before you can access the information in, and submit an application through, *Grants.gov.*

If you are currently registered with SAM, you may not need to make any changes. However, please make certain that the TIN associated with your DUNS number is correct. Also note that you will need to update your registration annually. This may take three or more business days.

Information about SAM is available at *www.SAM.gov.* To further assist you with obtaining and registering your DUNS number and TIN in SAM or updating your existing SAM account, we have prepared a *SAM.gov* Tip Sheet, which you can find at: *http://www2.ed.gov/fund/grant/apply/sam-faqs.html.*

In addition, if you are submitting your application via *Grants.gov,* you must (1) be designated by your organization as an Authorized Organization Representative (AOR); and (2) register yourself with *Grants.gov* as an AOR. Details on these steps are outlined at the following *Grants.gov* Web page: *www.grants.gov/web/grants/register.html.*

7. *Other Submission Requirements:* Applications for grants under this competition must be submitted electronically unless you qualify for an exception to this requirement in accordance with the instructions in this section.

a. Electronic Submission of Applications

Applications for grants under the Indian Education—Professional Development Grants program, CFDA number 84.299B, must be submitted electronically using the Governmentwide *Grants.gov* Apply site at *www.Grants.gov.* Through this site, you will be able to download a copy of the application package, complete it offline, and then upload and submit your application. You may not email an electronic copy of a grant application to us.

We will reject your application if you submit it in paper format unless, as described elsewhere in this section, you qualify for one of the exceptions to the electronic submission requirement *and* submit, no later than two weeks before the application deadline date, a written statement to the Department that you qualify for one of these exceptions. Further information regarding calculation of the date that is two weeks before the application deadline date is provided later in this section under *Exception to Electronic Submission Requirement.*

You may access the electronic grant application for the Indian Education—Professional Development Grants program at *www.Grants.gov.* You must search for the downloadable application package for this program by the CFDA number. Do not include the CFDA number's alpha suffix in your search (*e.g.,* search for 84.299, not 84.299B).

Please note the following:

- When you enter the *Grants.gov* site, you will find information about submitting an application electronically through the site, as well as the hours of operation.
- Applications received by *Grants.gov* are date and time stamped. Your application must be fully uploaded and submitted and must be date and time stamped by the *Grants.gov* system no later than 4:30:00 p.m., Washington, DC time, on the application deadline date. Except as otherwise noted in this section, we will not accept your application if it is received—that is, date and time stamped by the *Grants.gov* system—after 4:30:00 p.m., Washington, DC time, on the application deadline date. We do not consider an application that does not comply with the deadline requirements. When we retrieve your application from *Grants.gov,* we will notify you if we are rejecting your application because it was date and time stamped by the *Grants.gov* system after 4:30:00 p.m., Washington, DC time, on the application deadline date.
- The amount of time it can take to upload an application will vary depending on a variety of factors, including the size of the application and the speed of your Internet connection. Therefore, we strongly recommend that you do not wait until the application deadline date to begin the submission process through *Grants.gov.*
- You should review and follow the Education Submission Procedures for submitting an application through *Grants.gov* that are included in the application package for this competition to ensure that you submit your application in a timely manner to the *Grants.gov* system. You can also find the Education Submission Procedures pertaining to *Grants.gov* under News and Events on the Department's G5 system home page at *www.G5.gov.* In addition, for specific guidance and procedures for submitting an application through *Grants.gov,* please refer to the *Grants.gov* Web site at: *www.grants.gov/web/grants/applicants/apply-for-grants.html.*
- You will not receive additional point value because you submit your application in electronic format, nor will we penalize you if you qualify for an exception to the electronic submission requirement, as described elsewhere in this section, and submit your application in paper format.
- You must submit all documents electronically, including all information you typically provide on the following forms: The Application for Federal Assistance (SF 424), the Department of Education Supplemental Information for SF 424, Budget Information—Non-Construction Programs (ED 524), and all necessary assurances and certifications.
- You must upload any narrative sections and all other attachments to your application as files in a read-only, non-modifiable Portable Document Format (PDF). Do not upload an interactive or fillable PDF file. If you upload a file type other than a read-only, non-modifiable PDF (*e.g.,* Word, Excel, WordPerfect, etc.) or submit a password-protected file, we will not review that material. Please note that this could result in your application not being considered for funding because the material in question—for example, the project narrative—is critical to a meaningful review of your proposal. For that reason it is important to allow yourself adequate time to upload all material as PDF files. The Department will not convert material from other formats to PDF.
- Your electronic application must comply with any page-limit requirements described in this notice.
- After you electronically submit your application, you will receive from *Grants.gov* an automatic notification of receipt that contains a *Grants.gov* tracking number. This notification indicates receipt by *Grants.gov* only, not receipt by the Department. *Grants.gov* will also notify you automatically by email if your application met all the *Grants.gov* validation requirements or if there were any errors (such as submission of your application by someone other than a registered

Authorized Organization Representative, or inclusion of an attachment with a file name that contains special characters). You will be given an opportunity to correct any errors and resubmit, but you must still meet the deadline for submission of applications.

Once your application is successfully validated by *Grants.gov*, the Department will retrieve your application from *Grants.gov* and send you an email with a unique PR/Award number for your application.

These emails do not mean that your application is without any disqualifying errors. While your application may have been successfully validated by *Grants.gov*, it must also meet the Department's application requirements as specified in this notice and in the application instructions. Disqualifying errors could include, for instance, failure to upload attachments in a read-only, non-modifiable PDF; failure to submit a required part of the application; or failure to meet applicant eligibility requirements. It is your responsibility to ensure that your submitted application has met all of the Department's requirements.

- We may request that you provide us original signatures on forms at a later date.

Application Deadline Date Extension in Case of Technical Issues with the Grants.gov System: If you are experiencing problems submitting your application through *Grants.gov*, please contact the *Grants.gov* Support Desk, toll free, at 1–800–518–4726. You must obtain a *Grants.gov* Support Desk Case Number and must keep a record of it.

If you are prevented from electronically submitting your application on the application deadline date because of technical problems with the *Grants.gov* system, we will grant you an extension until 4:30:00 p.m., Washington, DC time, the following business day to enable you to transmit your application electronically or by hand delivery. You also may mail your application by following the mailing instructions described elsewhere in this notice.

If you submit an application after 4:30:00 p.m., Washington, DC time, on the application deadline date, please contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice and provide an explanation of the technical problem you experienced with *Grants.gov*, along with the *Grants.gov* Support Desk Case Number. We will accept your application if we can confirm that a technical problem occurred with the *Grants.gov* system and that the problem affected your ability to submit your application by 4:30:00 p.m., Washington, DC time, on the application deadline date. We will contact you after we determine whether your application will be accepted.

Note: The extensions to which we refer in this section apply only to the unavailability of, or technical problems with, the *Grants.gov* system. We will not grant you an extension if you failed to fully register to submit your application to *Grants.gov* before the application deadline date and time or if the technical problem you experienced is unrelated to the *Grants.gov* system.

Exception to Electronic Submission Requirement: You qualify for an exception to the electronic submission requirement, and may submit your application in paper format, if you are unable to submit an application through the *Grants.gov* system because—

- You do not have access to the Internet; or
- You do not have the capacity to upload large documents to the *Grants.gov* system;

and

- No later than two weeks before the application deadline date (14 calendar days or, if the fourteenth calendar day before the application deadline date falls on a Federal holiday, the next business day following the Federal holiday), you mail or fax a written statement to the Department, explaining which of the two grounds for an exception prevents you from using the Internet to submit your application.

If you mail your written statement to the Department, it must be postmarked no later than two weeks before the application deadline date. If you fax your written statement to the Department, we must receive the faxed statement no later than two weeks before the application deadline date.

Address and mail or fax your statement to: John Cheek, U.S. Department of Education, 400 Maryland Avenue SW., Room 3W207, Washington, DC 20202–6335. FAX: (202) 205–0606.

Your paper application must be submitted in accordance with the mail or hand delivery instructions described in this notice.

b. Submission of Paper Applications by Mail

If you qualify for an exception to the electronic submission requirement, you may mail (through the U.S. Postal Service or a commercial carrier) your application to the Department. You must mail the original and two copies of your application, on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, Attention: (CFDA Number 84.299B), LBJ Basement Level 1, 400 Maryland Avenue SW., Washington, DC 20202–4260.

You must show proof of mailing consisting of one of the following:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary of the U.S. Department of Education.

If you mail your application through the U.S. Postal Service, we do not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

Note: The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, you should check with your local post office.

We will not consider applications postmarked after the application deadline date.

c. Submission of Paper Applications by Hand Delivery

If you qualify for an exception to the electronic submission requirement, you (or a courier service) may deliver your paper application to the Department by hand. You must deliver the original and two copies of your application by hand, on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, Attention: (CFDA Number 84.299B), 550 12th Street SW., Room 7039, Potomac Center Plaza, Washington, DC 20202–4260.

The Application Control Center accepts hand deliveries daily between 8:00 a.m. and 4:30:00 p.m., Washington, DC time, except Saturdays, Sundays, and Federal holidays.

Note for Mail or Hand Delivery of Paper Applications: If you mail or hand deliver your application to the Department—

(1) You must indicate on the envelope and—if not provided by the Department—in Item 11 of the SF 424 the CFDA number, including suffix letter, if any, of the competition under which you are submitting your application; and

(2) The Application Control Center will mail to you a notification of receipt of your grant application. If you do not receive this notification within 15 business days from the application deadline date, you should call the U.S. Department of Education Application Control Center at (202) 245–6288.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this competition include general selection criteria in 34 CFR 75.210 and selection criteria in 34 CFR 263.6 and are also listed in the application package. We will award up to 100 points to an application under each selection criteria; the total possible points for each selection criterion are noted in parentheses.

(a) *Need for project* (Maximum 15 points). The Secretary considers the need for the proposed project. In determining the need for the proposed project, the Secretary considers the following factors:

(1) The extent to which specific gaps or weaknesses in services, infrastructure, or opportunities have been identified and will be addressed by the proposed project, including the nature and magnitude of those gaps or weaknesses.

(2) The extent to which employment opportunities exist in the project's service area, as demonstrated through a job market analysis.

(b) *Quality of the project design* (Maximum 25 points). The Secretary considers the following factors in determining the quality of the design of the proposed project:

(1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are ambitious but also attainable and address—

(i) The number of participants expected to be recruited in the project each year;

(ii) The number of participants expected to continue in the project each year;

(iii) The number of participants expected to graduate; and

(iv) The number of participants expected to find qualifying jobs within twelve months of completion.

(2) The extent to which the proposed project has a plan for recruiting and selecting participants that ensures that program participants are likely to complete the program.

(3) The potential of the proposed project to develop effective strategies for teaching Indian students and improving Indian student achievement, as demonstrated by a plan to share findings gained from the proposed project with parties who could benefit from such findings, such as other institutions of higher education who are training teachers and administrators who will be serving Indian students.

(4) The extent to which the proposed project will incorporate the needs of potential employers, as identified by a job market analysis, by establishing partnerships and relationships with appropriate entities (*e.g.*, Bureau-funded schools, organizations providing educational services to Indian students, and LEAs) and developing programs that meet their employment needs.

(c) *Quality of project services* (Maximum 25 points). The Secretary considers the following factors in determining the quality of project services:

(1) The likelihood that the proposed project will provide participants with learning experiences that develop needed skills for successful teaching and/or administration in schools with significant Indian populations.

(2) The extent to which the proposed project prepares participants to adapt teaching and/or administrative practices to meet the breadth of Indian student needs.

(3) The extent to which the applicant will provide job placement activities that reflect the findings of a job market analysis and needs of potential employers.

(4) The extent to which the applicant will offer induction services that reflect the latest research on effective delivery of such services.

(5) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

(d) *Quality of project personnel* (Maximum 15 points). The Secretary considers the following factors when determining the quality of the personnel who will carry out the proposed project:

(1) The qualifications, including relevant training, experience, and cultural competence, of the project director and the amount of time this individual will spend directly involved in the project.

(2) The qualifications, including relevant training, experience, and cultural competence, of key project personnel and the amount of time to be spent on the project and direct interactions with participants.

(3) The qualifications, including relevant training, experience, and cultural competence (as necessary), of project consultants or subcontractors, if any.

(e) *Quality of the management plan.* (Maximum 20 points). In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:

(1) The extent to which the costs are reasonable in relation to the number of persons to be served and to the anticipated results and benefits.

(2) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.

(3) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project.

2. *Review and Selection Process:* We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary requires various assurances, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department of Education (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

3. *Risk Assessment and Special Conditions:* Consistent with 2 CFR 200.205, before awarding grants under this competition the Department conducts a review of the risks posed by applicants. Under 2 CFR 3474.10, the Secretary may impose special conditions and, in appropriate circumstances, high-risk conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 2 CFR part 200, subpart D; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN); or we may send you an email containing a link to access an electronic version of your GAN. We may notify you informally, also.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other

requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Reporting:* (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multiyear award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to *www.ed.gov/fund/grant/apply/appforms/appforms.html.*

(c) Under 34 CFR 75.250(b), the Secretary may provide a grantee with additional funding for data collection analysis and reporting. In this case the Secretary establishes a data collection period.

4. *Performance Measures:* The Department has established the following Government Performance and Results Act of 1993 (GPRA) performance measures for the Indian Education Professional Development program: (1) The percentage of participants in administrator preparation projects who become principals, vice principals, or other school administrators in LEAs that serve American Indian and Alaska Native students; (2) The percentage of participants in teacher preparation projects who become teachers in LEAs that serve American Indian and Alaska Native students; (3) The percentage of program participants who meet State licensure requirements; (4) The percentage of program participants who complete their service requirement on schedule; (5) The cost per individual who successfully completes an administrator preparation program, takes a position in a school district that benefits American Indian/Alaska Native enrollment, and completes the service requirement in such a district; and (6) The cost per individual who successfully completes a teacher preparation program, takes a position in such a school district that benefits American Indian/Alaska Native enrollment, and completes the service requirement in such a district.

These measures constitute the Department's indicator of success for this program. Consequently, we advise an applicant for a grant under this program to give careful consideration to these measures in conceptualizing the approach and evaluation for its proposed project. Each grantee will be required to provide, in its annual performance and final reports, data about its progress in meeting these measures.

5. *Continuation Awards:* In making a continuation award under 34 CFR 75.253, the Secretary considers, among other things: Whether a grantee has made substantial progress in achieving the goals and objectives of the project; whether the grantee has expended funds in a manner that is consistent with its approved application and budget; and, if the Secretary has established performance measurement requirements, the performance targets in the grantee's approved application.

In making a continuation award, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Agency Contact

FOR FURTHER INFORMATION CONTACT: John Cheek, U.S. Department of Education, 400 Maryland Avenue SW., Room 3W207, Washington, DC 20202–6335. Telephone: (202) 401–0274 or by email: *john.cheek@ed.gov.*

If you use a TDD or a TTY, call the FRS, toll free, at 1–800–877–8339.

VIII. Other Information

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (*e.g.,* braille, large print, audiotape, or compact disc) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: *www.gpo.gov/fdsys.* At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or PDF. To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at: *www.federalregister.gov.* Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Dated: May 11, 2016.

Ann Whalen,

Senior Advisor Delegated the Duties of Assistant Secretary for Elementary and Secondary Education.

[FR Doc. 2016–11606 Filed 5–16–16; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Reopening; Application Deadline for Fiscal Year 2016; Small, Rural School Achievement Program

AGENCY: Office of Elementary and Secondary Education, Department of Education.

ACTION: Notice.

Catalog of Federal Domestic Assistance (CFDA) Number: 84.358A.

SUMMARY: On February 5, 2016, we published in the **Federal Register** (81 FR 6251) a notice inviting applications for fiscal year (FY) 2016 awards under the Small, Rural School Achievement (SRSA) program. The notice established a deadline of May 2, 2016, for submission of FY 2016 SRSA grant applications. This notice reopens the application period until May 31, 2016, 4:30:00 p.m., Washington, DC time. All other requirements and conditions stated in the notice inviting applications remain the same.

DATES: *Deadline for Transmittal of Applications*: May 31, 2016, 4:30:00 p.m., Washington, DC time.

SUPPLEMENTARY INFORMATION: The Department contacts local educational agencies that we determine to be newly eligible for SRSA funding, informs them of their eligibility, and instructs them to apply for funding. Due to unanticipated delays in the eligibility determination process, eligible applicants were not able to submit their applications for FY 2016 awards under the SRSA program by the close of the initial application period. Therefore, we are reopening the application period until May 31, 2016, 4:30:00 p.m., Washington, DC time. All other requirements and conditions stated in the notice inviting applications remain the same.

Applicants that did not meet the initial May 2 deadline must submit applications by May 31 to be considered for FY 2016 funding. Applicants that already submitted timely applications that meet all of the requirements of the notice inviting applications do not have to resubmit their applications.

FOR FURTHER INFORMATION CONTACT: David Cantrell, Rural Programs Group Leader, Office of Elementary and Secondary Education, 400 Maryland Avenue SW., Room 3E–204, Washington, DC 20202. Telephone: (202) 453–5990 or by email: *reap@ed.gov.*

If you use a telecommunications device for the deaf or a text telephone, call the Federal Relay Service, toll free, at 1–800–877–8339.

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (*e.g.,* braille, large print, audiotape, or compact disc) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT.**

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: *www.gpo.gov/fdsys.* At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at: *www.federalregister.gov.* Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Program Authority: Sections 6211–6213 of the Elementary and Secondary Education Act of 1965, as amended by the No Child Left Behind Act of 2001.

Dated: May 12, 2016.

Ann Whalen,

Senior Advisor to the Secretary Delegated the Duties of Assistant Secretary for Elementary and Secondary Education.

[FR Doc. 2016–11594 Filed 5–16–16; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2016–ICCD–0059]

Agency Information Collection Activities; Comment Request; Survey on the Use of Funds Under Title II, Part A (SEA Uses of Funds)

AGENCY: Office of Elementary and Secondary Education (OESE), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before July 18, 2016.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use *http://www.regulations.gov* by searching the Docket ID number ED–2016–ICCD–0059. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Room 2E–115, Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Elizabeth Witt, 202–260–5585.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Survey on the Use of Funds Under Title II, Part A (SEA Uses of Funds).

OMB Control Number: 1810–0711.

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: State, Local, and Tribal Governments.

Total Estimated Number of Annual Responses: 52.

Total Estimated Number of Annual Burden Hours: 260.

Abstract: This SEA survey helps the Department of Education understand how SEAs use their allocated Title II, Part A funds. In addition, many States have adopted new college- and career-ready standards and assessments and new educator evaluation systems; this survey provides insight into whether states are using title II, part A funds to support these goals. The survey also allows the Department to assess whether SEAs are using title II, part A funds to carry out their approved plans for equitable access to excellent educators.

Dated: May 12, 2016.

Tomakie Washington,

Acting Director, Information Collection Clearance Division, Office of the Chief Privacy Officer, Office of Management.

[FR Doc. 2016–11590 Filed 5–16–16; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Charter Schools Program (CSP) Grants for Replication and Expansion of High-Quality Charter Schools; Correction

AGENCY: Office of Innovation and Improvement, Department of Education.

ACTION: Notice; correction.

SUMMARY: On May 10, 2016, we published in the **Federal Register** (81 FR 28837) a notice inviting applications for new awards for fiscal year (FY) 2016 for the CSP Grants for Replication and Expansion of High-Quality Charter

Schools program. This correction notice amends (1) the date of the pre-application webinar from June 16, 2016, to May 24, 2016; and (2) the deadline for transmittal of applications from June 20, 2016, to June 24, 2016. All other requirements and conditions stated in the notice inviting applications, including the deadline for intergovernmental review, remain the same.

DATES: *Date of Pre-Application Webinar:* May 24, 2016, 2:00 p.m. to 3:30 p.m., Washington, DC, time. *Deadline for Transmittal of Applications:* June 24, 2016.

FOR FURTHER INFORMATION CONTACT: Brian Martin, U.S. Department of Education, 400 Maryland Avenue SW., Room 4W224, Washington, DC 20202–5970. Telephone: (202) 205–9085, or by email: *brian.martin@ed.gov.*

If you use a telecommunications device for the deaf (TDD) or a text telephone (TTY), call the Federal Relay Service, toll free, at 1–800–877–8339.

SUPPLEMENTARY INFORMATION:

Corrections

On May 10, 2016, we published in the **Federal Register** (81 FR 28837) a notice inviting applications for new awards for FY 2016 for the CSP Grants for Replication and Expansion of High-Quality Charter Schools program. On page 28837 of that notice, in the third column, under **DATES**, and on page 28842, in the first column, under 3. *Submission Dates and Times*, we change the Date of Pre-Application Webinar from "June 16, 2016," to "May 24, 2016." The time and duration of the webinar remain the same.

Also, on page 28837, in the third column, under **DATES**, we correct the Deadline for Transmittal of Applications from "June 20, 2016," to "June 24, 2016." The Deadline for Transmittal of Applications listed in the first column on page 28842 is correct and remains unchanged.

All other requirements and conditions stated in the notice inviting applications, including the deadline for intergovernmental review, remain the same.

Program Authority: Consolidated Appropriations Act, 2016, Division H, Public Law 114–113; and title V, part B of the Elementary and Secondary Education Act of 1965, as amended by the No Child Left Behind Act of 2001.

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (*e.g.*, braille, large print, audiotape, or compact disc) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT.**

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: *www.gpo.gov/fdsys.* At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Adobe Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at: *www.federalregister.gov.* Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Dated: May 12, 2016.

Nadya Chinoy Dabby,

Assistant Deputy Secretary for Innovation and Improvement.

[FR Doc. 2016–11717 Filed 5–16–16; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF ENERGY

Environmental Management Site-Specific Advisory Board, Hanford

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: This notice announces a meeting of the Environmental Management Site-Specific Advisory Board (EM SSAB), Hanford. The Federal Advisory Committee Act (Pub. L. 92–463, 86 Stat. 770) requires that public notice of this meeting be announced in the **Federal Register**.

DATES: Wednesday, June 8, 2016; 9:00 a.m.–5:00 p.m., Thursday, June 9, 2016; 8:30 a.m.–1:00 p.m.

ADDRESSES: Red Lion Hanford House, 802 George Washington Way, Richland, WA 99352.

FOR FURTHER INFORMATION CONTACT: Kristen Holmes, Federal Coordinator, Department of Energy Richland Operations Office, 825 Jadwin Avenue, P.O. Box 550, A7–75, Richland, WA, 99352; Phone: (509) 376–5803; or Email: *Kristen.L.Holmes@rl.doe.gov.*

SUPPLEMENTARY INFORMATION:

Purpose of the Board: The purpose of the Board is to make recommendations to DOE–EM and site management in the areas of environmental restoration, waste management, and related activities.

Tentative Agenda

- Potential Draft Advice
  - DOE's Master Acquisition Plan
- Discussion Topics
  - Tri-Party Agreement Agencies' Updates
  - Hanford Advisory Board Committee Reports
  - Safety Culture Sounding Board
  - Waste Treatment Plant Communication Approach
  - Cesium Management and Disposition Alternatives for Low Activity Waste Pretreatment System
  - Board Business

Public Participation: The meeting is open to the public. The EM SSAB, Hanford, welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Kristen Holmes at least seven days in advance of the meeting at the phone number listed above. Written statements may be filed with the Board either before or after the meeting. Individuals who wish to make oral statements pertaining to agenda items should contact Kristen Holmes at the address or telephone number listed above. Requests must be received five days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Deputy Designated Federal Officer is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Individuals wishing to make public comments will be provided a maximum of five minutes to present their comments.

Minutes: Minutes will be available by writing or calling Kristen Holmes's office at the address or phone number listed above. Minutes will also be available at the following Web site: *http://www.hanford.gov/page.cfm/hab.*

Issued at Washington, DC, on May 11, 2016.

LaTanya R. Butler,

Deputy Committee Management Officer.

[FR Doc. 2016–11603 Filed 5–16–16; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Environmental Management Site-Specific Advisory Board, Northern New Mexico

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: This notice announces a combined meeting of the Environmental Monitoring and Remediation Committee and Waste Management Committee of the Environmental Management Site-Specific Advisory Board (EM SSAB), Northern New Mexico (known locally as the Northern New Mexico Citizens' Advisory Board [NNMCAB]). The Federal Advisory Committee Act (Pub. L. 92–463, 86 Stat. 770) requires that public notice of this meeting be announced in the **Federal Register**.

DATES: Wednesday, June 15, 2016, 1:00 p.m.–4:00 p.m.

ADDRESSES: NNMCAB Office, 94 Cities of Gold Road, Santa Fe, NM 87506.

FOR FURTHER INFORMATION CONTACT: Menice Santistevan, Northern New Mexico Citizens' Advisory Board, 94 Cities of Gold Road, Santa Fe, NM 87506. Phone (505) 995–0393; Fax (505) 989–1752 or Email: *menice.santistevan@em.doe.gov.*

SUPPLEMENTARY INFORMATION:

Purpose of the Board: The purpose of the Board is to make recommendations to DOE–EM and site management in the areas of environmental restoration, waste management, and related activities.

Purpose of the Environmental Monitoring and Remediation Committee (EM&R): The EM&R Committee provides a citizens' perspective to NNMCAB on current and future environmental remediation activities resulting from historical Los Alamos National Laboratory (LANL) operations and, in particular, issues pertaining to groundwater, surface water and work required under the New Mexico Environment Department Order on Consent. The EM&R Committee will keep abreast of DOE–EM and site programs and plans. The committee will work with the NNMCAB to provide assistance in determining priorities and the best use of limited funds and time. Formal recommendations will be proposed when needed and, after consideration and approval by the full NNMCAB, may be sent to DOE–EM for action.

Purpose of the Waste Management (WM) Committee: The WM Committee reviews policies, practices and procedures, existing and proposed, so as to provide recommendations, advice, suggestions and opinions to the NNMCAB regarding waste management operations at the Los Alamos site.

Tentative Agenda:

- Call to Order and Introductions
- Approval of Agenda
- Approval of Minutes from April 27, 2016
- Old Business
- New Business
  - ○ Discuss Topics for Future Recommendations
  - ○ Mid-Year Review of Committee Work Plans
  - ○ Future Topics for Meeting Presentations
- Update from DOE
- Presentation: Update on Supplemental Environmental Projects
- Public Comment Period
- Adjourn

Public Participation: The NNMCAB's Committees welcome the attendance of the public at their combined committee meeting and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Menice Santistevan at least seven days in advance of the meeting at the telephone number listed above. Written statements may be filed with the Committees either before or after the meeting. Individuals who wish to make oral statements pertaining to agenda items should contact Menice Santistevan at the address or telephone number listed above. Requests must be received five days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Deputy Designated Federal Officer is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Individuals wishing to make public comments will be provided a maximum of five minutes to present their comments.

Minutes: Minutes will be available by writing or calling Menice Santistevan at the address or phone number listed above. Minutes and other Board documents are on the Internet at: *http://energy.gov/em/nnmcab/northern-new-mexico-citizens-advisory-board.*

Issued at Washington, DC, on May 11, 2016.

LaTanya R. Butler,

Deputy Committee Management Officer.

[FR Doc. 2016–11607 Filed 5–16–16; 8:45 am]

BILLING CODE 6405–01–P

DEPARTMENT OF ENERGY

[OE Docket No. EA–418]

Application To Export Electric Energy; Termoelectrica U.S., LLC

AGENCY: Office of Electricity Delivery and Energy Reliability, DOE.

ACTION: Notice of application.

SUMMARY: Termoelectrica U.S., LLC (Applicant) has applied for authority to transmit electric energy from the United States to Mexico pursuant to section 202(e) of the Federal Power Act.

DATES: Comments, protests, or motions to intervene must be submitted on or before June 16, 2016.

ADDRESSES: Comments, protests, motions to intervene, or requests for more information should be addressed to: Office of Electricity Delivery and Energy Reliability, Mail Code: OE–20, U.S. Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585–0350. Because of delays in handling conventional mail, it is recommended that documents be transmitted by overnight mail, by electronic mail to *Electricity.Exports@hq.doe.gov,* or by facsimile to 202–586–8008.

SUPPLEMENTARY INFORMATION: Exports of electricity from the United States to a foreign country are regulated by the Department of Energy (DOE) pursuant to sections 301(b) and 402(f) of the Department of Energy Organization Act (42 U.S.C. 7151(b), 7172(f)) and require authorization under section 202(e) of the Federal Power Act (16 U.S.C. 824a(e)).

On March 21, 2016, DOE received an application from the Applicant for authority to transmit electric energy from the United States to Mexico as a power marketer solely over the TDM Gen-Tie, an authorized international electric transmission facility issued in Presidential Permit PP–235–2 and for a period not to extend beyond the date of termination of the associated Presidential Permit PP–235–2.

In its application, the Applicant states that it does own or control an electric generation or transmission facility at the point where the 230kV generation tie-line crosses the U.S. Mexico border, and does not have a franchised service area. The Applicant's request is limited to the delivery of intermittent and de minimis start-up and station power to the TDM Facility over the TDM-Gen-Tie. The electric energy that the Applicant proposes to export to Mexico would be surplus energy purchased from third parties such as electric utilities and Federal power marketing agencies pursuant to voluntary agreements. The existing international transmission facility to be utilized by the Applicant have previously been authorized by Presidential permits issued pursuant to Executive Order 10485, as amended, and are appropriate for open access transmission by third parties.

Procedural Matters: Any person desiring to be heard in this proceeding should file a comment or protest to the application at the address provided above. Protests should be filed in accordance with Rule 211 of the Federal Energy Regulatory Commission's (FERC) Rules of Practice and Procedures (18 CFR 385.211). Any person desiring to become a party to these proceedings should file a motion to intervene at the above address in accordance with FERC Rule 214 (18 CFR 385.214). Five copies of such comments, protests, or motions to intervene should be sent to the address provided above on or before the date listed above.

Comments and other filings concerning the Applicant's application to export electric energy to Mexico should be clearly marked with OE Docket No. EA–418. An additional copy is to be provided to both Daniel A. King, Sempra U.S. Gas & Power, LLC, 488 8th Ave., HQ12S1, San Diego, CA 92101 and Jose A. Lau, Sempra International, LLC, 488 8th Ave., HQ13N1, San Diego, CA 92101.

A final decision will be made on this application after the environmental impacts have been evaluated pursuant to DOE's National Environmental Policy Act Implementing Procedures (10 CFR part 1021) and after a determination is made by DOE that the proposed action will not have an adverse impact on the sufficiency of supply or reliability of the U.S. electric power supply system.

Copies of this application will be made available, upon request, for public inspection and copying at the address provided above, by accessing the program Web site at *http://energy.gov/node/11845,* or by emailing Angela Troy at *Angela.Troy@hq.doe.gov.*

Issued in Washington, DC, on May 11, 2016.

Christopher Lawrence,

Energy Policy Analyst, Office of Electricity Delivery and Energy Reliability.

[FR Doc. 2016–11601 Filed 5–16–16; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Environmental Management Site-Specific Advisory Board, Oak Ridge Reservation

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: This notice announces a meeting of the Environmental Management Site-Specific Advisory Board (EM SSAB), Oak Ridge Reservation. The Federal Advisory Committee Act (Pub. L. 92–463, 86 Stat. 770) requires that public notice of this meeting be announced in the **Federal Register**.

DATES: Wednesday, June 8, 2016 6:00 p.m.

ADDRESSES: Department of Energy Information Center, Office of Science and Technical Information, 1 Science.gov Way, Oak Ridge, Tennessee 37830.

FOR FURTHER INFORMATION CONTACT: Melyssa P. Noe, Federal Coordinator, Department of Energy Oak Ridge Operations Office, P.O. Box 2001, EM–90, Oak Ridge, TN 37831. Phone (865) 241–3315; Fax (865) 576–0956 or email: *melyssa.noe@orem.doe.gov* or check the Web site at *http://energy.gov/orem/services/community-engagement/oak-ridge-site-specific-advisory-board.*

SUPPLEMENTARY INFORMATION:

Purpose of the Board: The purpose of the Board is to make recommendations to DOE–EM and site management in the areas of environmental restoration, waste management, and related activities.

Tentative Agenda

- Welcome and Announcements
- Comments from the Deputy Designated Federal Officer (DDFO)
- Comments from the DOE, Tennessee Department of Environment and Conservation, and Environmental Protection Agency Liaisons
- Public Comment Period
- Presentation: Technology Development to Support Mercury Cleanup Strategy
- Additions/Approval of Agenda
- Motions/Approval of May 11, 2016 Meeting Minutes
- Status of Recommendations with DOE
- Committee Reports
- Alternate DDFO Report
- Adjourn

Public Participation: The EM SSAB, Oak Ridge, welcomes the attendance of the public at its advisory committee meetings and will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Melyssa P. Noe at least seven days in advance of the meeting at the phone number listed above. Written statements may be filed with the Board either before or after the meeting. Individuals who wish to make oral statements pertaining to the agenda item should contact Melyssa P. Noe at the address or telephone number listed above. Requests must be received five days prior to the meeting and reasonable provision will be made to include the presentation in the agenda. The Deputy Designated Federal Officer is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business. Individuals wishing to make public comments will be provided a maximum of five minutes to present their comments.

Minutes: Minutes will be available by writing or calling Melyssa P. Noe at the address and phone number listed above. Minutes will also be available at the following Web site: *http://energy.gov/orem/services/community-engagement/oak-ridge-site-specific-advisory-board.*

Issued at Washington, DC, on May 11, 2016.

LaTanya R. Butler,

Deputy Committee Management Officer.

[FR Doc. 2016–11605 Filed 5–16–16; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. DI16–2–000]

Nicatous Lake Lodge and Cabins, LLC; Notice of Declaration of Intention and Soliciting Comments, Protests, and Motions To Intervene

Take notice that the following application has been filed with the Commission and is available for public inspection:

a. *Application Type:* Declaration of Intention.

b. *Docket No:* DI16–2–000.

c. *Date Filed:* March 18, 2016.

d. *Applicant:* Nicatous Lake Lodge and Cabins, LLC.

e. *Name of Project:* Nicatous Lodge Micro Hydroelectric Project.

f. *Location:* The proposed Nicatous Lodge Micro Hydroelectric Project would be located on the Nicatous Stream, near the town of Burlington, in Hancock County, Maine.

g. *Filed Pursuant to:* Section 23(b)(1) of the Federal Power Act, 16 U.S.C. 817(b) (2012).

h. *Applicant Contact:* Nicatous Lake Lodge and Cabins, LLC, P.O. Box 100, Burlington, ME 04417, telephone: (207) 356–7506; email: *nicatouslodge1@att.com;* and Mr. David Dane, owner, P.O. Box 100, Burlington, ME 04417; telephone: (814) 244–4282, email: *davidallendane@gmail.com.*

i. *FERC Contact:* Any questions on this notice should be addressed to Jennifer Polardino, (202) 502–6437, or email: *Jennifer.Polardino@ferc.gov.*

j. *Deadline for filing comments, protests, and motions to intervene is:* 30 days from the issuance date of this notice by the Commission.

The Commission strongly encourages electronic filing. Please file comments, protests, and motions to intervene using the Commission's eFiling system at *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov,* (866) 208–3676 (toll free), or (202) 502–8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426. The first page of any filing should include docket number DI16–02–000.

k. *Description of Project:* The proposed Nicatous Lodge Micro Hydroelectric Project would consist of: (1) An intake structure on Nicatous Stream (2) a 5-inch-diameter, 100-foot-long diversion canal connecting to a 5-inch-diameter, 5-foot-long PVC penstock pipe that conveys diverted flows to a generating unit; (3) a generating unit having a total installed capacity of 1 kilowatt rated at 5 feet of net head; (4) a tailrace that returns the diverted flows to the Nicatous Stream; (5) a transmission line connecting the generating unit to the Nicatous Lodge property; and (6) appurtenant facilities.

When a Declaration of Intention is filed with the Federal Energy Regulatory Commission, the Federal Power Act requires the Commission to investigate and determine if the project would affect the interests of interstate or foreign commerce. The Commission also determines whether or not the project: (1) Would be located on a navigable waterway; (2) would occupy public lands or reservations of the United States; (3) would utilize surplus water or water power from a government dam; or (4) would be located on a non-navigable stream over which Congress has Commerce Clause jurisdiction and would be constructed or enlarged after 1935.

l. *Locations of the Application:* This filing may be viewed on the Commission's Web site at *http://www.ferc.gov/docs-filing/elibrary.asp.* Enter the docket number excluding the last three digits in the docket number field to access the document. You may also register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, call 1–866–208–3676 or email *FERCOnlineSupport@ferc.gov,* for TTY, call (202) 502–8659. A copy is also available for inspection and reproduction at the address in item (h) above and in the Commission's Public Reference Room located at 888 First Street NE., Room 2A, Washington, DC 20426, or by calling (202) 502–8371.

m. Individuals desiring to be included on the Commission's mailing list should so indicate by writing to the Secretary of the Commission.

n. *Comments, Protests, or Motions to Intervene:* Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of Rules of Practice and Procedure, 18 CFR 385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

o. *Filing and Service of Responsive Documents:* All filings must bear in all capital letters the title "COMMENTS", "PROTESTS", and "MOTIONS TO INTERVENE", as applicable, and the Docket Number of the particular application to which the filing refers. A copy of any Motion to Intervene must also be served upon each representative of the Applicant specified in the particular application.

p. *Agency Comments:* Federal, state, and local agencies are invited to file comments on the described application. A copy of the application may be obtained by agencies directly from the Applicant. If an agency does not file comments within the time specified for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

Dated: May 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–11552 Filed 5–16–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. AD16–18–000]

Competitive Transmission Development, Technical Conference; Supplemental Notice of Technical Conference and Request for Speakers

As announced in the Notice of Technical Conference issued in this proceeding on March 17, 2016, the Federal Energy Regulatory Commission will hold a Commissioner-led technical conference on June 27, 2016, from approximately 1:00 p.m. to 5:00 p.m., and on June 28, 2016, from approximately 9:00 a.m. to 5:00 p.m., at the Commission's headquarters at 888 First Street NE., Washington, DC 20426. The purpose of the technical conference is to discuss issues related to competitive transmission development processes, including, but not limited to, the use of cost containment provisions, the relationship of competitive transmission development to transmission incentives, and other ratemaking issues.[1] In addition, participants will have the opportunity to discuss issues relating to interregional transmission coordination, regional transmission planning and other transmission development issues.[2]

Attached to this Supplemental Notice is a preliminary agenda for the technical conference and a description of key concepts.

Those interested in speaking at the technical conference should notify the Commission by May 17, 2016, by completing the online form at the following Web page: *https://www.ferc.gov/whats-new/registration/06-27-16-speaker-form.asp.* At this Web page, please describe the topic(s) you wish to address and provide biographical information. Due to time constraints, we anticipate that we may not be able to accommodate all those interested in speaking. We will notify selected speakers as soon as possible.

Interested parties may submit pre-technical conference comments (with a ten page limit) for consideration in Docket No. AD16–18–000 no later than May 31, 2016.

The conference will be open for the public to attend. Information on the technical conference will also be posted on the Calendar of Events on the Commission's Web site, *http://www.ferc.gov,* prior to the event. Advance registration is not required but is encouraged. Attendees may register at the following Web page: *https://www.ferc.gov/whats-new/registration/06-27-16-form.asp.*

This event will be webcast and transcribed. Anyone with internet access can navigate to the "FERC Calendar" at *www.ferc.gov,* and locate the technical conference in the Calendar of Events. Opening the technical conference in the Calendar of Events will reveal a link to its webcast. The Capitol Connection provides technical support for the webcast and offers the option of listening to the meeting via phone-bridge for a fee. If you have any questions, visit *www.capitolconnection.org* or call 703–993–3100. The webcast will be available on the Calendar of Events at *www.ferc.gov* for three months after the conference. Transcripts of the conference will be immediately available for a fee from Ace-Federal Reporters, Inc. (202–347–3700).

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[1] Topics to be discussed include, but are not limited to, those that the Commission described in *NextEra Energy Transmission West, LLC,* 154 FERC ¶ 61,009, at PP 76–78 (2015) and *ITC Grid Development, LLC,* 154 FERC ¶ 61,206, at P 49 (2016).

[2] *See Northern Indiana Public Service Co.* v. *Midcontinent Independent System Operator, Inc. and PJM Interconnection L.L.C.,* 155 FERC ¶ 61,058, at P 54 (2016).

Commission conferences are accessible under section 508 of the Rehabilitation Act of 1973. For accessibility accommodations, please send an email to *accessibility@ferc.gov* or call toll free 1–866–208–3372 (voice) or 202–502–8659 (TTY), or send a FAX to 202–208–2106 with the required accommodations.

For more information about this technical conference, please contact:

Sarah McKinley (Logistical Information), Office of External Affairs, (202) 502–8004, *sarah.mckinley@ferc.gov*
David Tobenkin (Technical Information), Office of Energy Policy and Innovation, (202) 502–6445, *david.tobenkin@ferc.gov*
Zeny Magos (Technical Information), Office of Energy Market Regulation, (202) 502–8244, *zeny.magos@ferc.gov*
Erica Siegmund Hough (Legal Information), Office of General Counsel, (202) 502–8251, *erica.siegmund@ferc.gov*

Dated: May 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–11551 Filed 5–16–16; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9946–44–OA]

Notification of Two Public Teleconferences of the Science Advisory Board; Environmental Economics Advisory Committee

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announces two public teleconferences of the Environmental Economics Advisory Committee (EEAC) to review its draft report regarding the EPA's proposed methodology for updating its mortality risk valuation estimates for policy analysis.

DATES: The SAB Environmental Economics Advisory Committee will conduct public teleconferences on June 16 and June 17, 2016. Each of the teleconferences will begin at 1:00 p.m. and end at 5:00 p.m. (Eastern Time).

ADDRESSES: The teleconferences will be conducted by telephone only.

FOR FURTHER INFORMATION CONTACT: Any member of the public who wants further information concerning the public teleconferences may contact Dr. Thomas Armitage, Designated Federal Officer (DFO), EPA Science Advisory Board Staff Office (1400R), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460; by telephone at (202) 564–2155 or via email *armitage.thomas@epa.gov.* General information concerning the EPA SAB can be found at *http://www.epa.gov/sab.*

SUPPLEMENTARY INFORMATION:

Background: The SAB was established pursuant to the Environmental Research, Development, and Demonstration Authorization Act (ERDDAA), codified at 42 U.S.C. 4365, to provide independent scientific and technical advice to the Administrator on the technical basis for Agency positions and regulations. The SAB is a federal advisory committee chartered under the Federal Advisory Committee Act (FACA), 5 U.S.C., App. 2. The SAB will comply with the provisions of FACA and all appropriate SAB Staff Office procedural policies. Pursuant to FACA and EPA policy, notice is hereby given that the SAB Environmental Economics Advisory Committee will hold two public teleconferences to discuss its draft report on the EPA's methodology for updating its mortality risk valuation estimates for policy analysis. The committee will provide advice to the Administrator through the chartered SAB.

The EPA's Office of Policy requested advice on proposed improvements to the Agency's methodology for estimating benefits associated with reduced risk of mortality. This methodology takes into account the amounts that individuals are willing to pay for reductions in mortality risk. The resulting values are combined into an estimate known as the value of statistical life (VSL) which is used in regulatory benefit-cost analysis. The EPA also requested that the SAB review options for accounting for changes in the VSL over time as real income grows, known as income elasticity of willingness to pay. The EPA submitted the following documents to the SAB for review: (1) *Valuing Mortality Risk for Policy: A Meta-analytic Approach,* a white paper prepared by the EPA Office of Policy to describe the Agency's interpretation and application of SAB recommendations received in July 2011 regarding updates to the EPA's estimates of mortality risk valuation; (2) *The Effect of Income on the Value of Mortality and Morbidity Risk Reductions,* a report prepared for the EPA's Office of Air and Radiation on options for updating the Agency's recommended estimate for the income elasticity of the value of statistical life; and (3) *Recommended Income Elasticity and Income Growth Estimates: Technical Memorandum,* an EPA memorandum providing supplementary information to the report. The SAB Environmental Economics Advisory Committee met on March 7–8, 2016, to receive agency briefings, hear public comments, and deliberate on responses to the EPA charge questions (81 FR 4296–4297). The purpose of the teleconferences described in this notice is to discuss the committee's draft report with responses to the charge questions. The two committee teleconferences will be conducted as one complete meeting beginning on June 16, 2016 and continuing on June 17, 2016, if needed to complete agenda items. Additional information about this SAB advisory activity can be found at the following URL: *http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Valuing%20fatal%20risk%20for%20policy?OpenDocument.*

Technical Contacts: Any technical questions concerning the EPA documents reviewed by the SAB should be directed to Dr. Nathalie Simon in the EPA's National Center for Environmental Economics, by telephone at (202) 566–2347 or by email at *simon.nathalie@epa.gov.*

Availability of Meeting Materials: Prior to the meeting, the teleconference agenda, draft committee report, and other materials will be available on the SAB Web site at *http://www.epa.gov/sab.*

Procedures for Providing Public Input: Public comment for consideration by EPA's federal advisory committees and panels has a different purpose from public comment provided to EPA program offices. Therefore, the process for submitting comments to a federal advisory committee is different from the process used to submit comments to an EPA program office. Federal advisory committees and panels, including scientific advisory committees, provide independent advice to the EPA. Interested members of the public may submit relevant information on the topic of this advisory activity, and/or the group conducting the activity, for the SAB to consider during the advisory process. Input from the public to the SAB will have the most impact if it provides specific scientific or technical information or analysis for SAB committees and panels to consider or if it relates to the clarity or accuracy of the technical information. Members of the public wishing to provide comment should contact the DFO directly. *Oral Statements:* In general, individuals or groups requesting an oral presentation at the teleconference will be limited to three minutes. Interested parties wishing to provide comments should contact Dr. Armitage, DFO, in writing (preferably via email) at the contact information noted above by June 9, 2016, to be placed on the list of public speakers for the meeting. *Written Statements:* Written statements will be accepted throughout the advisory process; however, for timely consideration by committee members, statements should be supplied to the DFO (preferably via email) at the contact information noted above by June 9, 2016. It is the SAB Staff Office general policy to post written comments on the Web page for advisory meetings. Submitters are requested to provide an unsigned version of each document because the SAB Staff Office does not publish documents with signatures on its Web sites. Members of the public should be aware that their personal contact information, if included in any written comments, may be posted to the SAB Web site. Copyrighted material will not be posted without explicit permission of the copyright holder.

Accessibility: For information on access or services for individuals with disabilities, please contact Dr. Armitage at the contact information provided above. To request accommodation of a disability, please contact Dr. Armitage preferably at least ten days prior to the meeting to give EPA as much time as possible to process your request.

Dated: May 9, 2016.

Thomas H. Brennan,

Deputy Director, EPA Science Advisory Board Staff Office.

[FR Doc. 2016–11622 Filed 5–16–16; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060–1096]

Information Collection Being Submitted for Review and Approval to the Office of Management and Budget

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: As part of its continuing effort to reduce paperwork burdens, and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communications Commission (FCC or Commission) invites the general public and other Federal agencies to take this opportunity to comment on the following information collections. Comments are requested concerning: Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and ways to further reduce the information collection burden on small business concerns with fewer than 25 employees. The FCC may not conduct or sponsor a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid OMB control number.

DATES: Written comments should be submitted on or before June 16, 2016. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contacts below as soon as possible.

ADDRESSES: Direct all PRA comments to Nicholas A. Fraser, OMB, via email *Nicholas_A._Fraser@omb.eop.gov*; and to Nicole Ongele, FCC, via email *PRA@fcc.gov* and to *Nicole.Ongele@fcc.gov*. Include in the comments the OMB control number as shown in the **SUPPLEMENTARY INFORMATION** section below.

FOR FURTHER INFORMATION CONTACT: For additional information or copies of the information collection, contact Nicole Ongele at (202) 418–2991. To view a copy of this information collection request (ICR) submitted to OMB: (1) Go to the Web page <*http://www.reginfo.gov/public/do/PRAMain*>, (2) look for the section of the Web page called "Currently Under Review," (3) click on the downward-pointing arrow in the "Select Agency" box below the "Currently Under Review" heading, (4) select "Federal Communications Commission" from the list of agencies presented in the "Select Agency" box, (5) click the "Submit" button to the right of the "Select Agency" box, (6) when the list of FCC ICRs currently under review appears, look for the OMB control number of this ICR and then click on the ICR Reference Number. A copy of the FCC submission to OMB will be displayed.

SUPPLEMENTARY INFORMATION:

OMB Control Number: 3060–1096.

Title: Prepaid Calling Card Service Provider Certification, WC Docket No. 05–68.

Form Number: N/A.

Type of Review: Extension of a currently approved collection.

Respondents: Business or other for-profit entities.

Number of Respondents and Responses: 121 respondents; 1,452 responses.

Estimated Time per Response: 2.5 hours–20 hours.

Frequency of Response: Quarterly reporting requirement, third party disclosure requirement and recordkeeping requirement.

Obligation to Respond: Mandatory. Statutory authority for this information collection is contained in 47 U.S.C. 151, 152, 154(i), 201, 202 and 254 of the Communications Act of 1934, as amended.

Total Annual Burden: 12,100 hours.

Total Annual Cost: No cost.

Privacy Impact Assessment: No impact(s).

Nature and Extent of Confidentiality: The Commission does not anticipate providing confidentiality of the information submitted by prepaid calling card providers. Particularly, the prepaid calling card providers must send reports to their transport providers. Additionally, the quarterly certifications sent to the Commission will be made public through the Commission's Electronic Comment Filing System (ECFS) process. These certifications will be filed in the Commission's docket associated with this proceeding. If the respondents submit information they believe to be confidential, they may request confidential treatment of such information under 47 CFR 0.459 of the Commission's rules.

Needs and Uses: The Commission will submit this expiring information collection after this comment period in order to obtain the full three-year clearance from the Office of Management and Budget (OMB).

The Commission is requesting approval for an extension (no change in the reporting, recordkeeping and/or third-party disclosure requirements). Prepaid calling card service providers must report quarterly the percentage of interstate, intrastate and international access charges to carriers from which they purchase transport services. Prepaid calling card providers must also file certifications with the Commission quarterly that include the above information and a statement that they are contributing to the federal Universal Service Fund based on all interstate and international revenue, except for revenue from the sale of prepaid calling cards by, to, or pursuant to contract with the Department of Defense (DoD) or a DoD entity.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

[FR Doc. 2016–11584 Filed 5–16–16; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060–0798]

Information Collection Being Submitted for Review and Approval to the Office of Management and Budget

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: As part of its continuing effort to reduce paperwork burdens, and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communications Commission (FCC or Commission) invites the general public and other Federal agencies to take this opportunity to comment on the following information collections. Comments are requested concerning: whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and ways to further reduce the information collection burden on small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid OMB control number.

DATES: Written comments should be submitted on or before June 16, 2016. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contacts below as soon as possible.

ADDRESSES: Direct all PRA comments to Nicholas A. Fraser, OMB, via email *Nicholas_A._Fraser@omb.eop.gov;* and to Cathy Williams, FCC, via email *PRA@fcc.gov* and to *Cathy.Williams@fcc.gov.* Include in the comments the OMB control number as shown in the "Supplementary Information" section below.

FOR FURTHER INFORMATION CONTACT: For additional information or copies of the information collection, contact Cathy Williams at (202) 418–2918. To view a copy of this information collection request (ICR) submitted to OMB: (1) Go to the Web page *http://www.reginfo.gov/public/do/PRAMain,* (2) look for the section of the Web page called "Currently Under Review," (3) click on the downward-pointing arrow in the "Select Agency" box below the "Currently Under Review" heading, (4) select "Federal Communications Commission" from the list of agencies presented in the "Select Agency" box, (5) click the "Submit" button to the right of the "Select Agency" box, (6) when the list of FCC ICRs currently under review appears, look for the OMB control number of this ICR and then click on the ICR Reference Number. A copy of the FCC submission to OMB will be displayed.

SUPPLEMENTARY INFORMATION:

OMB Control Number: 3060–0798.

Title: FCC Application for Radio Service Authorization; Wireless Telecommunications Bureau; Public Safety and Homeland Security Bureau.

Form Number: FCC Form 601.

Type of Review: Revision of a currently approved collection.

Respondents: Individuals and households; Business or other for-profit entities; Not-for-profit institutions; and State, local or tribal government.

Number of Respondents and Responses: 253,320 respondents and 253,320 responses.

Estimated Time per Response: 0.5–1.25 hours.

Frequency of Response: Recordkeeping requirement, third party disclosure requirement, on occasion reporting requirement and periodic reporting requirement.

Obligation to Respond: Required to obtain or retain benefits. The statutory authority for this collection of information is contained in 47 U.S.C. 151, 152, 154, 154(i), 155(c), 157, 201, 202, 208, 214, 301, 302a, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 331, 332, 333, 336, 534, 535 and 554.

Total Annual Burden: 222,055 hours.

Total Annual Cost: $71,306,250.

Privacy Impact Assessment: Yes.

Nature and Extent of Confidentiality: In general there is no need for confidentiality with this collection of information.

Needs and Uses: FCC Form 601 is a consolidated, multi-part application form that is used for market-based and site-based licensing for wireless telecommunications services, including public safety licenses, which are filed through the Commission's Universal Licensing System (ULS). FCC Form 601 is composed of a main form that contains administrative information and a series of schedules used for filing technical and other information. This form is used to apply for a new license, to amend or withdraw a pending application, to modify or renew an existing license, cancel a license, request a duplicate license, submit required notifications, request an extension of time to satisfy construction requirements, or request an administrative update to an existing license (such as mailing address change), request a Special Temporary Authority or Developmental License. Respondents are encouraged to submit FCC Form 601 electronically and are required to do so when submitting FCC Form 601 to apply for an authorization for which the applicant was the winning bidder in a spectrum auction.

The data collected on FCC Form 601 includes the FCC Registration Number (FRN), which serves as a "common link" for all filings an entity has with the FCC. The Debt Collection Improvement Act of 1996 requires entities filing with the Commission use an FRN.

On July 20, 2015, the Commission released the part 1 R&O in which it updated many of its part 1 competitive bidding rules (See Updating Part 1 Competitive Bidding Rules; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions; Petition of DIRECTV Group, Inc. and EchoStar LLC for Expedited Rulemaking to Amend Section 1.2105(a)(2)(xi) and 1.2106(a) of the Commission's Rules and/or for Interim Conditional Waiver; Implementation of the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures, Report and Order, Order on Reconsideration of the First Report and Order, Third Order on Reconsideration of the Second Report and Order, and Third Report and Order, FCC 15–80, 30 FCC Rcd 7493 (2015), modified by Erratum, 30 FCC Rcd 8518 (2015) (Part 1 R&O)). Of relevance to the information collection at issue here, the Commission: (1) Implemented a new general prohibition on the filing of auction applications by entities controlled by the same individual or set of individuals (but with a limited exception for qualifying rural wireless partnerships); (2) modified the eligibility requirements for small business benefits, and updated the standardized schedule of small business sizes, including the gross revenues thresholds used to determine eligibility; (3) established a new bidding credit for eligible rural service providers; (4) adopted targeted attribution rules to prevent the unjust enrichment of ineligible entities; and (5) adopted rules prohibiting joint bidding arrangements with limited exceptions. The updated Part 1 rules apply to applicants seeking licenses and permits.

Additionally, on June 2, 2014 the Commission released the Mobile Spectrum Holdings R&O, in which the Commission updated its spectrum screen and established rules for its upcoming auctions of low-band spectrum. Of relevance to the information collection at issue here, the Commission stated that it could reserve spectrum in order to ensure against excessive concentration in holdings of below-1–GHz spectrum (In the Matter of Policies Regarding Mobile Spectrum Holdings, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, FCC 14–63, Report and Order, 29 FCC Rcd 6133, 90) 135 (2014) (Mobile Spectrum Holdings R&O). See also Application Procedures for Broadcast Incentive Auction Scheduled to Begin on March 29, 2016; Technical Formulas for Competitive Bidding, Public Notice, 30 FCC Rcd 11034, Appendix 3 (WTB 2015); Wireless Telecommunications Bureau Releases Updated List of Reserve-Eligible Nationwide Service Providers in each PEA for the Broadcast Incentive Auction, Public Notice, AU No. 14–252 (WTB 2016).

The Commission seeks approval for revisions to its previously approved collection of information under OMB Control Number 3060–0798 to permit the collection of the additional information for Commission licenses and permits, pursuant to the rules and information collection requirements adopted by the Commission in the Part 1 R&O and the Mobile Spectrum Holdings R&O. As part of the collection, the Commission is seeking approval for the information collection and recordkeeping requirements associated with 47 CFR 1.2210(j), 1.2112(b)(2)(iii), 1.2112(b)(2)(v), 1.2112(b)(2)(vii), and 1.2112(b)(2)(viii). Also, in certain circumstances, the Commission requires the applicant to provide copies of their agreements and/or submit exhibits.

In addition, the Commission seeks approval for various other, non-substantive editorial/consistency edits and updates to FCC Form 601 that correct inconsistent capitalization of words and other typographical errors, and better align the text on the form with the text in the Commission rules both generally and in connection with recent non-substantive, organizational amendments to the Commission's rules. The Commission therefore seeks approval for a revision to its currently approved information collection on FCC Form 601 to revise FCC Form 601 accordingly.

Federal Communications Commission.

Marlene H. Dortch,

Secretary, Office of the Secretary.

[FR Doc. 2016–11582 Filed 5–16–16; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060–0207]

Information Collection Being Reviewed by the Federal Communications Commission

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: As part of its continuing effort to reduce paperwork burdens, and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communications Commission (FCC or the Commission) invites the general public and other Federal agencies to take this opportunity to comment on the following information collection. Comments are requested concerning: Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and ways to further reduce the information collection burden on small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the PRA that does not display a valid Office of Management and Budget (OMB) control number.

DATES: Written PRA comments should be submitted on or before July 18, 2016. If you anticipate that you will be submitting comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the contact listed below as soon as possible.

ADDRESSES: Direct all PRA comments to Nicole Ongele, FCC, via email *PRA@fcc.gov* and to *Nicole.Ongele@fcc.gov.*

FOR FURTHER INFORMATION CONTACT: For additional information about the information collection, contact Nicole Ongele at (202) 418–2991.

SUPPLEMENTARY INFORMATION:

OMB Control Number: 3060–0207.

Title: Part 11—Emergency Alert System (EAS), Order, FCC 16–32.

Form Number: N/A.

Type of Review: Revision of a currently approved collection.

Respondents: Business or other for-profit entities, not-for-profit institutions, and state, local or tribal government.

Number of Respondents and Responses: 63,080 respondents; 3,596,546 responses.

Estimated Time per Response: 1 hour (EAS Participants); 20 hours (SECCs).

Frequency of Response: One-time reporting requirement and recordkeeping requirement.

Obligation to Respond: Obligatory for all entities required to participate in

EAS. Statutory authority for this collection of information is contained in 47 U.S.C. 154(i) and 606 of the Communications Act of 1934, as amended.

Total Annual Burden: 110,476 hours.

Total Annual Cost: No cost.

Privacy Impact Assessment: No Impact(s).

Nature and Extent of Confidentiality: There is no need for confidentiality.

Needs and Uses: Part 11 contains rules and regulations addressing the nation's Emergency Alert System (EAS). The EAS provides the President with the capability to provide immediate communications and information to the general public at the national, state and local area level during periods of national emergency. The EAS also provides state and local governments and the National Weather Service with the capability to provide immediate communications and information to the general public concerning emergency situations posing a threat to life and property. State and local use of the EAS is required to be described in State EAS Plans that are administered by State Emergency Communications Committees (SECC) and submitted to the FCC for approval.

In the *Third Report and Order* in EB Docket No. 04–296, FCC 11–12, the Commission adopted rules establishing a regulatory structure for a national test of the EAS. In order for the Commission to determine the extent to which the test, and by extension the EAS, was successful, the FCC adopted rules requiring EAS Participants, within forty five (45) days of the date of the first national EAS test, to record and submit to the Commission the following test-related diagnostic information for each alert received from each message source monitored at the time of the national test:

- Whether they received the alert message during the designated test;
- whether they retransmitted the alert;
- if they were not able to receive and/or transmit the alert, their 'best effort' diagnostic analysis regarding the cause(s) for such failure;
- a description of their station identification and level of designation (PEP, LP–1, etc.);
- the date/time of receipt of the EAN message by all stations; the date/time of PEP station acknowledgement of receipt of the EAN message to FOC;
- the date/time of initiation of actual broadcast of the Presidential message;
- the date/time of receipt of the EAT message by all stations;
- who they were monitoring at the time of the test, and the make and model number of the EAS equipment that they utilized.

The *Third Report and Order* indicates that the national tests of EAS, and related information collections will likely be carried out on an annual basis. On March 10, 2010, OMB approved the collection as indicated by the related Notice of Office of Management and Budget Action notification.

The FCC is submitting this information collection to the Office of Management and Budget (OMB) as a revision of the previously approved information collection that established the mandatory Electronic Test Reporting System (ETRS) that EAS Participants must utilize to file identifying and test result data as part of their participation in nationwide EAS testing. Specifically, the *Order* adopted in EB Docket No. 04–296, FCC 16–32, amends the State EAS Plan filing requirements set forth at Section 11.21 of the Commission's rules to require EAS Participants (*i.e.,* the broadcasters, cable systems, and other service providers subject to the FCC's EAS rules) to provide the following information to their respective SECC, who in turn will include such information in the State EAS Plan submitted to the Commission for approval:

- A description of any actions taken by the EAS Participant (acting individually, in conjunction with other EAS Participants in the geographic area, and/or in consultation with state and local emergency authorities), to make EAS alert content available in languages other than English to its non-English speaking audience(s);
- A description of any future actions planned by the EAS Participant, in consultation with state and local emergency authorities, to provide EAS alert content in languages other than English to its non-English speaking audience(s), along with an explanation for the EAS Participant's decision to plan or not plan such actions; and
- Any other relevant information that the EAS Participant may wish to provide.

In addition, in the event that there is a material change to any of the information that EAS Participants are required to furnish their respective SECCs, EAS Participants must, within 60 days of the occurrence of such material change, submit aa letter to their respective SECCs, copying the Commission's Public Safety and Homeland Security Bureau (Bureau) that describe such change. The SECCs are required to incorporate the information in such letters as amendments to the State EAS Plans on file with the Bureau.

This information will be used by FCC staff to gauge the effectiveness of the EAS's capacity to disseminate in-language EAS emergency alert content to persons who communicate in a language other than English or may have a limited understanding of the English language; to determine whether private and local efforts to disseminate EAS multilingual content might be incorporated into the overall national EAS structure; and to confirm that private and local EAS multilingual operations are consistent with national plans, FCC regulations, and EAS operation.

The Commission expects that the costs to EAS Participants to comply with these reporting requirements will be minimal, and largely limited to internal administrative charges associated with drafting a brief statement, and submitting that statement, and any other relevant information that the EAS Participant may wish to provide to their SECC for inclusion into the State EAS Plan for the state in which the EAS Participant operates. The Commission further expects that the vast majority of EAS Participants are not engaged in multilingual EAS activities and therefore will need to submit nothing more than a very brief statement to their SECC explaining their decision to plan or not plan future actions to provide EAS alert content in languages other than English to their non-English speaking audience(s). For the presumably small percentage of EAS Participants that actually are engaged in multilingual EAS activities, the filing will merely require that they supply a summary of actions they already have taken in this regard. Accordingly, the FCC estimates that complying with the reporting requirement will take EAS Participants, on average, approximately one hour. The FCC estimates that compiling the EAS Participant summaries of multilingual EAS activities and incorporating such information into the State EAS Plan will take SECCs, on average, approximately 20 hours.

The following information collection contained in part 11 may be impacted by these rule amendments: Section 11.21 requires that state and local EAS plans be reviewed and approved by the Chief, Public Safety and Homeland Security, prior to implementation to ensure that they are consistent with national plans, FCC regulations, and EAS operation.

Federal Communications Commission.
Marlene H. Dortch,
Secretary.
[FR Doc. 2016–11583 Filed 5–16–16; 8:45 am]
BILLING CODE 6712–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–D–1224]

Use of Electronic Health Record Data in Clinical Investigations; Draft Guidance for Industry; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of a draft guidance for industry entitled "Use of Electronic Health Record Data in Clinical Investigations." The draft guidance is intended to assist sponsors, clinical investigators, contract research organizations, institutional review boards (IRBs), and other interested parties on the use of electronic health record (EHR) data in FDA-regulated clinical investigations.

DATES: Although you can comment on any guidance at any time (see 21 CFR 10.115(g)(5)), to ensure that the Agency considers your comment on this draft guidance before it begins work on the final version of the guidance, submit either electronic or written comments on the draft guidance by July 18, 2016.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see "Written/Paper Submissions" and "Instructions").

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand deliveryCourier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in "Instructions."

Instructions: All submissions received must include the Docket No. FDA–2016–D–1224 for "Use of Electronic Health Record Data in Clinical Investigations; Draft Guidance for Industry; Availability." Received comments will be placed in the docket and, except for those submitted as "Confidential Submissions," publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

- *Confidential Submissions*—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states "THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION." The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as "confidential." Any information marked as "confidential" will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the "Search" box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

Submit written requests for single copies of the draft guidance to the Division of Drug Information, Center for Drug Evaluation and Research, Food and Drug Administration, 10001 New Hampshire Ave., Hillandale Building, 4th Floor, Silver Spring, MD 20993–0002; the Office of Communication, Outreach, and Development, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 3128, Silver Spring, MD 20993–0002; or the Office of the Center Director, Guidance and Policy Development, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 5431, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your requests. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the draft guidance document.

FOR FURTHER INFORMATION CONTACT: Cheryl Grandinetti, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 51, Rm. 3348, Silver Spring, MD 20993–0002, 301–796–2500; Stephen Ripley, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993–0002, 240–402–7911; or Irfan Khan, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 3563, Silver Spring, MD 20993–0002, 301–796–7100.

SUPPLEMENTARY INFORMATION:

I. Background

FDA is announcing the availability of a draft guidance for industry entitled "Use of Electronic Health Record Data in Clinical Investigations." The draft guidance is intended to assist sponsors, clinical investigators, contract research organizations, IRBs, and other interested parties on the use of EHR data in FDA-regulated clinical investigations. In particular, the draft guidance provides recommendations on the following: (1) Deciding whether and how to use EHRs as a source of data in clinical investigations; (2) using EHRs that are interoperable with electronic systems supporting clinical investigations; (3) ensuring the quality and the integrity of EHR data that are collected and used as electronic source data in clinical investigations; and (4) ensuring that the use of EHR data collected and used as electronic source data in clinical investigations meet FDA's inspection, recordkeeping, and record retention requirements. In an effort to modernize and streamline clinical investigations, the goals of the draft guidance are to facilitate use of EHR data in clinical investigations and to promote the interoperability of EHRs and electronic systems supporting the clinical investigation.

This draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance, when finalized, will represent the current thinking of FDA on the use of EHR data in clinical investigations. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. Paperwork Reduction Act of 1995

This draft guidance refers to collections of information that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The draft guidance pertains to sponsors, clinical investigators, contract research organizations, IRBs, and other interested parties who use EHR systems as electronic source data in FDA-regulated clinical investigations and who send certain information to FDA or others or who keep certain records and make them available to FDA inspectors. The collections of information discussed in the draft guidance are contained in our investigational new drug regulations in part 312 (21 CFR part 312), approved under OMB control number 0910–0014, including §§ 312.58(a) and 312.62(b); investigational device exemption regulations in § 812.140 (21 CFR 812.140) approved under OMB control number 0910–0078; and electronic records; electronic signatures regulations in 21 CFR part 11, approved under OMB control number 0910–0303. The use of EHR systems as a source of data, as described in the draft guidance, would not result in any new costs, including capital costs or operating and maintenance costs, because sponsors and others already have and are experienced with using computer-based equipment and software necessary to be consistent with the draft guidance.

III. Electronic Access

Persons with access to the Internet may obtain the draft guidance at *http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/default.htm, http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/default.htm, http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/default.htm*, or *http://www.regulations.gov.*

Dated: May 11, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–11564 Filed 5–16–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The contract proposals and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the contract proposals, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Allergy and Infectious Diseases, Special Emphasis Panel, NIAID Peer Review Meeting.

Date: June 9, 2016.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: To review and evaluate contract proposals.

Place: National Institutes of Health, Room 3G61, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Travis J Taylor, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, Room 3G62B 5601 Fishers Lane, MSC 9823, Bethesda, MD 20892–9823, (240) 669–5082, *Travis.Taylor@nih.gov.*

Name of Committee: National Institute of Allergy and Infectious Diseases, Special Emphasis Panel, Rapid Assessment of Zika Virus (ZIKV) Complications (R21).

Date: June 14, 2016.

Time: 12:00 p.m. to 7:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health 3F100, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Amir E. Zeituni, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities NIAID/NIH/DHHS, 5601 Fishers Lane, MSC–9834 Rockville, MD 20852, 301–496–2550, *amir.zeituni@nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: May 11, 2016.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–11554 Filed 5–16–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Submission for OMB Review; 30-Day Comment Request; National Institutes of Health (NIH) Loan Repayment Programs; Office of the Director (OD)

Summary: Under the provisions of Section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the Division of Loan Repayment (DLR), the National Institutes of Health (NIH), has submitted to the Office of Management and Budget (OMB) a request to review and approve the information collection listed below. This proposed information collection was previously published in the **Federal Register** on February 19, 2016, and page numbers 8514–8516, and allowed 60 days for public comment. No public comments were received. The purpose of this notice is to allow an additional 30 days for public comment. The NIH may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

Direct Comments to OMB: Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the: Office of Management and Budget, Office of Regulatory Affairs, *OIRA_submission@omb.eop.gov* or by fax to 202–395–6974, Attention: NIH Desk Officer.

Comment Due Date: Comments regarding this information collection are best assured of having their full effect if received within 30 days of the date of this publication.

For Further Information: To obtain a copy of the data collection plans and instruments or request more information on the proposed project contact: Steve Boehlert, Director of Operations, Division of Loan Repayment, National Institutes of Health, 6011 Executive Blvd., Room 206 (MSC 7650), Bethesda, Maryland 20892–7650. Mr. Boehlert may be contacted via email at *BoehlerS@od.nih.gov* or by calling 301–451–4465. Formal requests for additional plans and instruments must be requested in writing.

Proposed Collection: National Institutes of Health (NIH) Loan Repayment Programs (LRP). *Type of Information Collection Request:* Extension of a currently approved collection (OMB No. 0925–0361, expiration date 06/30/17). Form Numbers: NIH 2674–1, NIH 2674–2, NIH 2674–3, NIH 2674–4, NIH 2674–5, NIH 2674–6, NIH 2674–7, NIH 2674–8, NIH 2674–9, NIH 2674–10, NIH 2674–11, NIH 2674–12, NIH 2674–13, NIH 2674–14, NIH 2674–15, NIH 2674–16, NIH 2674–17, NIH 2674–18, NIH 2674–19, and NIH 2674–20.

Need and Use of Information Collection: The NIH makes available financial assistance, in the form of educational loan repayment, to M.D., Ph.D., Pharm.D., Psy.D., D.O., D.D.S., D.M.D., D.P.M., DC, N.D., O.D., D.V.M., or equivalent degree holders who perform biomedical or behavioral research in NIH intramural laboratories or as extramural grantees or scientists funded by domestic non-profit organizations for a minimum of two years (three years for the General Research Loan Repayment Program (LRP)) in research areas supporting the mission and priorities of the NIH.

The AIDS Research Loan Repayment Program (AIDS–LRP) is authorized by Section 487A of the Public Health Service Act (42 U.S.C. 288–1); the Clinical Research Loan Repayment Program for Individuals from Disadvantaged Backgrounds (CR–LRP) is authorized by Section 487E (42 U.S.C. 288–5); the General Research Loan Repayment Program (GR–LRP) is authorized by Section 487C of the Public Health Service Act (42 U.S.C. 288–3); the Clinical Research Loan Repayment Program (LRP–CR) is authorized by Section 487F (42 U.S.C. 288–5a); the Pediatric Research Loan Repayment Program (PR–LRP) is authorized by Section 487F (42 U.S.C. 288–6); the Extramural Clinical Research LRP for Individuals from Disadvantaged Backgrounds (ECR–LRP) is authorized by an amendment to Section 487E (42 U.S.C. 288–5); the Contraception and Infertility Research LRP (CIR–LRP) is authorized by Section 487B (42 U.S.C. 288–2); and the Health Disparities Research Loan Repayment Program (HD–LRP) is authorized by Section 485G (42 U.S.C. 287c–33).

The Loan Repayment Programs can repay up to $35,000 per year toward a participant's extant eligible educational loans, directly to financial institutions. The information proposed for collection will be used by the Division of Loan Repayment to determine an applicant's eligibility for participation in the program.

Frequency of Response: Initial application and one or two-year renewal application.

Affected Public: Individuals or households; Nonprofits; and Businesses or other for-profit.

Type of Respondents: Physicians, other scientific or medical personnel, and institutional representatives.

OMB approval is requested for 3 years. There are no costs to respondents other than their time. The total estimated annualized burden hours are 33,242.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Number of respondents	Estimated number of responses per respondent	Average burden hours per response	Annual burden hours requested
Intramural LRPs:				
Initial Applicants	40	1	10	400
Advisors/Supervisors	40	1	1	40
Recommenders	120	1	30/60	60
Financial Institutions	8	1	15/60	2
Subtotal	208			502
Extramural LRPs:				
Initial Applicants	1,650	1	11	18,150
Advisors/Supervisors	1,480	1	1	1,480
Recommenders	4,950	1	30/60	2,475
Financial Institutions	100	1	15/60	25
Subtotal	8,180			22,130
Intramural LRPs:				
Renewal Applicants	40	1	7	280
Advisors/Supervisors	40	1	2	80
Subtotal	80			360
Extramural LRPS:				
Renewal Applicants	1,000	1	8	8,000
Advisors/Supervisors	750	1	1	750
Recommenders	3,000	1	30/60	1,500
Subtotal	4,750			10,250

ESTIMATED ANNUALIZED BURDEN HOURS—Continued

Type of respondent	Number of respondents	Estimated number of responses per respondent	Average burden hours per response	Annual burden hours requested
Total	13,218			33,242

Dated: May 11, 2016.

Lawrence A. Tabak,

Deputy Director, National Institutes of Health.

[FR Doc. 2016–11618 Filed 5–16–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S. Government and is available for licensing and/or co-development in the U.S. in accordance with 35 U.S.C. 209 and 37 CFR part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing and/or co-development.

ADDRESSES: Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD 20850–9702.

FOR FURTHER INFORMATION CONTACT: Information on licensing and co-development research collaborations, and copies of the U.S. patent applications listed below may be obtained by contacting: Attn. Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD 20850–9702, Tel. 240–276–5515 or email *ncitechtransfer@mail.nih.gov.* A signed Confidential Disclosure Agreement may be required to receive copies of the patent applications.

SUPPLEMENTARY INFORMATION: Technology description follows.

Title of invention: Method for Purifying Antibodies.

Description of Technology: This technology is a method for purifying a biologic composition, comprising diafiltering the biologic composition into a composition comprising phosphate buffered saline (PBS) to obtain a purified composition. The method is particularly useful for removing one or more impurities from the biologic composition, such as bis(2-hydroxyethyl)amino-tris(hydroxymethyl)methane (Bis-tris).The technology is directed to large scale manufacturing of Chimeric 14.18 (Ch14.18) monoclonal antibodies. Ch14.18 is an anti-GD2 monoclonal antibody and has been described in Gillies *et al., Journal of Immunological Methods* 125:191–202 (1989).

Potential Commercial Applications:

- Large scale manufacturing of chimeric monoclonal antibodies

Value Proposition:

- Cost effective means of removing impurities to produce GMP grade chimeric antibodies for regulatory approval.

Development Stage: Clinical Phase II, FDA/EMA approved Chemistry, Manufacturing and Controls (CMC) large scale manufacturing to produce GMP grade chimeric antibodies.

Inventor(s): David A. Meh (United Therapeutics Corporation), Timothy Atolagbe (United Therapeutics Corporation), G. Mark Farquharson (United Therapeutics Corporation), Samir Shaban (National Cancer Institute), Mary Koleck (National Cancer Institute), George Mitra (National Cancer Institute).

Intellectual Property:

HHS Ref. No. E–291–2014/0–US–01, corresponding to US Provisional Patent App. No. 62/028,994, filed July 25, 2014, entitled "Method for Purifying Antibodies using PBS"

HHS Ref. No. E–291–2014/0–US–02, corresponding to US Patent App. No. 14/809,211, filed July 25, 2015, entitled "Method for Purifying Antibodies using PBS"

HHS Ref. No. E–291–2014/0–PCT–03, corresponding to International Patent App. No. PCT/US2015/042241, filed July 27, 2015, entitled "Method for Purifying Antibodies"

Publications:

1. FDA published document: *http://www.accessdata.fda.gov/drugsatfda_docs/nda/2015/125516Orig1s000TOC.cfm*
2. US Food and Drug Administration. FDA approves first therapy for high-risk neuroblastoma.*http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm437460.htm*
3. WO2016015048 METHOD FOR PURIFYING ANTIBODIES *https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2016015048*

Contact Information: Requests for copies of the patent application or inquiries about licensing, research collaborations, and co-development opportunities should be sent to John D. Hewes, Ph.D., email: *john.hewes@nih.gov.*

Dated: May 11, 2016.

John D. Hewes,

Technology Transfer Specialist, Technology Transfer Center, National Cancer Institute.

[FR Doc. 2016–11556 Filed 5–16–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S. Government and is available for licensing and/or co-development in the U.S. in accordance with 35 U.S.C. 209 and 37 CFR part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing and/or co-development.

ADDRESSES: Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD 20850–9702.

FOR FURTHER INFORMATION CONTACT: Information on licensing and co-development research collaborations, and copies of the U.S. patent applications listed below may be obtained by contacting: Attn. Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD 20850–9702, Tel. 240–276–5515 or email *ncitechtransfer@mail.nih.gov.* A signed Confidential Disclosure Agreement may be required to receive copies of the patent applications.

SUPPLEMENTARY INFORMATION: Technology description follows.

Title of invention: Improved Pepper Spray for Repellency and Incapacitation.

Description of Technology: Non-lethal means of temporarily incapacitating a person are greatly needed for law enforcement and for personal protection. A common approach is to use pepper spray. Although current pepper sprays are effective, they cause pain for excessively long periods, and could be life threatening for people who suffer from asthma and have hypersensitive airways. This technology describes a composition for use in an aerosol or spray, that when administered, causes a painful stimulation and incapacitates a person for only a brief period. This technology may improve safety over currently available pepper sprays.

Potential Commercial Applications:

- Law enforcement (policing, riot control, crowd control)
- Incapacitating agent for use in hostage situations
- Personal self-defense

Value Proposition:

- Incapacitating pepper spray with reduced toxicity and enhanced safety.
- May reduce potential agency liability in case of an adverse response of an individual who was sprayed (due to reduced toxicity may not be as life threatening to those suffering from asthma or have hypersensitive airways as standard pepper sprays).
- Mixture can be incorporated into a spray, aerosol, or other dispersions.

Development Stage: Basic (Target ID).

Inventor(s): Peter M. Blumberg (NCI), Larry V. Pearce (NCI).

Intellectual Property:

HHS Reference No. E–048–2010/0.

U.S. Provisional Application 61/340,063 (HHS Reference No. E–048–2010/0–US–01) filed March 12, 2010 entitled, "Improved Pepper Spray for Repellency and Incapacitation of People and Animals".

PCT Application PCT/US2011/028132 (HHS Reference No. E–048–2010/0–PCT–02) filed March 11, 2011 entitled, "Agonist/Antagonist Compositions and Methods of Use".

Canada: Application 2,792, 878 (HHS Reference No. E–048–2010/0–CA–03) filed March 11, 2011 entitled, "Agonist/Antagonist Compositions and Methods of Use" (Pending).

U.S. Patent Application 13/634,447 (HHS Reference No. E–048–2010/0–US–04) filed September 12, 2012 entitled, "Agonist/Antagonist Compositions and Methods of Use".

U.S. Patent Application 15/010,830 (HHS Reference No. E–048–2010/0–US–05) filed January 29, 2016 entitled, "Agonist/Antagonist Compositions and Methods of Use" (Pending).

Collaboration Opportunity: Researchers at the NCI seek licensing for use as a non-lethal incapacitation agent.

Contact Information: Requests for copies of the patent application or inquiries about licensing, research collaborations, and co-development opportunities should be sent to John D. Hewes, Ph.D., email: *john.hewes@nih.gov.*

Dated: May 11, 2016.

John D. Hewes,

Technology Transfer Specialist, Technology Transfer Center, National Cancer Institute.

[FR Doc. 2016–11555 Filed 5–16–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; Investigator Initiated Extended Clinical Trial (R01).

Date: June 6, 2016.

Time: 1:00 p.m. to 2:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health 3C100, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Yong Gao, Ph.D., Scientific Review Officer Scientific Review Program, Division of Extramural Activities, Room #3G13B, National Institutes of Health/NIAID, 5601 Fishers Lane, MSC 9823, Rockville, MD 20892–7616, (240) 669–5048, *yong.gao@nih.gov.*

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; Investigator Initiated Extended Clinical Trial (R01).

Date: June 6, 2016.

Time: 2:30 p.m. to 3:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 3C100, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Yong Gao, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, Room #3G13B, National Institutes of Health/NIAID, 5601 Fishers Lane, MSC 9823, Rockville, MD 20892–7616, (240) 669–5048, *.gao@nih.gov.*

Name of Committee: Microbiology, Infectious Diseases and AIDS Initial Review Group; Microbiology and Infectious Diseases Research Committee.

Date: June 9–10, 2016.

Time: 12:00 p.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Room 3F100, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Frank S. De Silva, Ph.D., Scientific Review Officer Scientific Review Program, Division of Extramural Activities, Room #3E72A, National Institutes of Health/NIAID, 5601 Fishers Lane, MSC 9834, Bethesda, MD 20892934, (240) 669–5023, *fdesilva@niaid.nih.gov.*

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel; Rapid Assessment of Zika Virus (ZIKV) Complications (R21).

Date: June 13, 2016.

Time: 9:30 a.m. to 4:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Room 3C100, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Uday K. Shankar, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, Room #3G21B, National Institutes of Health, NIAID, 5601 Fishers Lane, MSC 9823, Bethesda, MD 20892–9823, (240) 669–5051, *uday.shankar@nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: *May 11, 2016.*

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–11553 Filed 5–16–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Substance Abuse and Mental Health Services Administration

Agency Information Collection Activities: Proposed Collection; Comment Request

In compliance with Section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 concerning opportunity for public comment on proposed collections of information, the Substance Abuse and Mental Health Services Administration (SAMHSA) will publish periodic summaries of proposed projects. To request more information on the proposed projects or to obtain a copy of the information collection plans, call the SAMHSA Reports Clearance Officer on (240) 276–1243.

Comments are invited on: (a) Whether the proposed collections of information are necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Proposed Project: Mental Health First Aid Evaluation—NEW.

The Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Mental Health Services (CMHS) is requesting approval from the Office of Management and Budget (OMB) for new data collection activities associated with its Mental Health First Aid (MHFA) program.

This information is needed to evaluate implementation of MHFA and Youth Mental Health First Aid in three distinct grant programs: Project Advancing Wellness and Resilience in Education (AWARE) State Education Agency (SEA) Cooperative Agreements, which provide funding to support MHFA and YMHFA training to state education agencies; Project AWARE Local Education Agency (LEA) Grants, which provide funding to school districts; and Project AWARE Community (C), a new funding opportunity in fiscal year 2015 that is intended to support MHFA and YMHFA training through a wide range of community organizations.

The MHFA/YMHFA evaluation will address both overarching and program-specific questions related to the implementation and effectiveness of widespread dissemination of mental health literacy programs through these three distinct funding mechanisms and increase SAMHSA's understanding of training, referral benefits, and issues in varied milieu (*e.g.,* implementation climate, leadership). These evaluation questions are essential to address because, although MHFA/YMHFA has a track record and well-articulated theory of action, it is vital for SAMHSA to be able to identify factors that are expected to increase or decrease the extent MHFA/YMHFA is disseminated and implemented with quality.

This data collection is covered under the requirements of Public Law 103–62, the Government Performance and Results Act (GPRA) of 1993,Title 38, section 527, Evaluation and Data Collection, as well as 38 CFR 1.15, Standards for Program Evaluation.

SAMHSA is requesting clearance for four data collection instruments:

(1) MHFA/YMHFA Pre-Training Survey.

(2) MHFA/YMHFA Post-Training Survey.

(3) MHFA/YMHFA 3-Month and 6-Month Follow-Up Survey.

(4) Qualitative protocol for interviews with site coordinators.

The table below reflects the annualized hourly burden.

Instrument/activity	Number of respondents	Responses per respondent	Total responses	Hours per response	Total burden hours
MHFA/YMHFA Pre-Training Survey	22,800	1	22,800	.33	7,524
MHFA/YMHFA Post-Training Survey	22,800	1	22,800	.25	5,700
MHFA/YMHFA 3-Month Follow-Up Survey	19,380	1	19,380	.17	3,294
MHFA/YMHFA 6-Month Follow-Up Survey	17,100	1	17,100	.17	2,907
Qualitative Interviews	23	1	23	.75	17.25
Total	22,823		82,103		19,442

Send comments to Summer King, SAMHSA Reports Clearance Officer, 5600 Fishers Lane, Room 15E57–B, Rockville, Maryland, 20857 *or* email her a copy at *summer.king@samhsa.hhs.gov.* Written comments should be received by July 18, 2016.

Summer King,

Statistician.

[FR Doc. 2016–11560 Filed 5–16–16; 8:45 am]

BILLING CODE 4162–20–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5949–N–01]

Notice of Aged Delinquent Portfolio Loan Sale (ADPLS)

AGENCY: Office of the Assistant Secretary for Housing—Federal Housing Commissioner, HUD.

ACTION: Notice of sales of mortgage loans.

SUMMARY: This notice announces HUD's intention to competitively sell certain unsubsidized single family mortgage loans, in a sealed bid sale offering called ADPLS, without Federal Housing Administration (FHA) mortgage insurance. This notice also generally describes the bidding process for the sale and certain persons who are ineligible to bid. This is the first ADPLS offering, and the sale will be held on May 18, 2016.

DATES: For this sale action, the Bidder's Information Package (BIP) was made available to qualified bidders on April 11, 2016. Bids for the ADPLS sale will be accepted on the Bid Date of May 18, 2016 (Bid Date). HUD anticipates that award(s) will be made on or after May 18, 2016 (the Award Date).

ADDRESSES: To become a qualified bidder and receive the BIP, prospective bidders must complete, execute, and submit a Confidentiality Agreement and a Qualification Statement acceptable to HUD. Both documents are available via the HUD Web site at: *http://*

www.hud.gov/sfloansales or via: *http://www.verdiassetsales.com*. Please execute electronically or mail and fax executed documents to Verdi Consulting, Inc.: Verdi Consulting, Inc., 8400 Westpark Drive, 4th Floor, McLean, VA 22102, Attention: HUD ADPLS Coordinator, Fax: 1–703–584–7790.

FOR FURTHER INFORMATION CONTACT: John Lucey, Director, Asset Sales Office, Room 3136, Department of Housing and Urban Development, 451 Seventh Street SW., Washington, DC 20410–8000; telephone 202–708–2625, extension 3927. Hearing- or speech-impaired individuals may call 202–708–4594 (TTY). These are not toll-free numbers.

SUPPLEMENTARY INFORMATION: HUD announces its intention to sell in ADPLS certain unsubsidized non-performing mortgage loans (Mortgage Loans) secured by single family properties located throughout the United States. A listing of the Mortgage Loans is included in the due diligence materials made available to qualified bidders. The Mortgage Loans will be sold without FHA insurance and with servicing released. HUD will offer qualified bidders an opportunity to bid competitively on the Mortgage Loans.

The Bidding Process

The BIP describes in detail the procedure for bidding in ADPLS. The BIP also includes a standardized non-negotiable Conveyance, Assignment and Assumption Agreement (CAA Agreement). Qualified bidders will be required to submit a deposit with their bid. Deposits are calculated based upon each qualified bidder's aggregate bid price.

HUD will evaluate the bids submitted and determine the successful bid, in terms of the best value to HUD, in its sole and absolute discretion. If a qualified bidder is successful, the qualified bidder's deposit will be non-refundable and will be applied toward the purchase price. Deposits will be returned to unsuccessful bidders. For ADPLS, settlements are expected to take place on or about June 27, 2016, and July 29th, 2016.

This notice provides some of the basic terms of sale. The CAA Agreement, which is included in the BIP, provides comprehensive contractual terms and conditions. To ensure a competitive bidding process, the terms of the bidding process and the CAA Agreement are not subject to negotiation.

Due Diligence Review

The BIP describes how qualified bidders may access the due diligence materials remotely via a high-speed Internet connection.

Mortgage Loan Sale Policy

HUD reserves the right to remove Mortgage Loans from ADPLS at any time prior to the Award Date. HUD also reserves the right to reject any and all bids, in whole or in part, and include any Mortgage Loans in a later sale. Deliveries of Mortgage Loans will occur in at least two settlements and the number of Mortgage Loans delivered will vary depending upon the number of Mortgage Loans the Participating Servicers have submitted for the payment of an FHA insurance claim. The Participating Servicers will not be able to submit claims on loans that are not included in the Mortgage Loan Portfolio set forth in the BIP.

There can be no assurance that any Participating Servicer will deliver a minimum number of Mortgage Loans to HUD or that a minimum number of Mortgage Loans will be delivered to the Purchaser.

The ADPLS Mortgage Loans are assigned to HUD pursuant to section 204(a)(1)(A) of the National Housing Act as amended under Title VI of the Departments of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriations Act, 1999. The sale of the Mortgage Loans is pursuant to section 204(g) of the National Housing Act.

Mortgage Loan Sale Procedure

HUD selected an open competitive whole-loan sale as the method to sell the Mortgage Loans for this specific sale transaction. For ADPLS, HUD has determined that this method of sale optimizes HUD's return on the sale of these Mortgage Loans, affords the greatest opportunity for all qualified bidders to bid on the Mortgage Loans, and provides the quickest and most efficient vehicle for HUD to dispose of the Mortgage Loans.

Bidder Ineligibility

In order to bid in ADPLS as a qualified bidder, a prospective bidder must complete, execute and submit both a Confidentiality Agreement and a Qualification Statement acceptable to HUD. In the Qualification Statement, the prospective bidder must provide certain representations and warranties regarding (i) a prospective bidder, (ii) a prospective bidder's board of directors, (iii) a prospective bidder's direct parent, (iii) a prospective bidder's subsidiaries, and (iv) any related entity with which the prospective bidder shares a common officer, director, subcontractor or sub-contractor who has access to Confidential Information as defined in the Confidentiality Agreement or is involved in the formation of a bid transaction ("Related Entities"), and (v) a prospective bidder's repurchase lenders. The prospective bidder is ineligible to bid on any of the Mortgage Loans included in ADPLS if the prospective bidder, its Related Entities or its repurchase lenders, is any of the following, unless other exceptions apply as provided for the in Qualification Statement.

1. An individual or entity that is currently debarred, suspended, or excluded from doing business with HUD pursuant to the Governmentwide Suspension and Debarment regulations at Title 2 of the Code of Federal Regulations, Parts 180 and 2424;
2. An individual or entity that is currently suspended, debarred or otherwise restricted by any department or agency of the federal government or of a state government from doing business with such department or agency;
3. An individual or entity that is currently debarred, suspended, or excluded from doing mortgage related business, including having a business license suspended, surrendered or revoked, by any federal, state or local government agency, division or department;
4. An entity that has had its right to act as a Government National Mortgage Association ("Ginnie Mae") issuer terminated and its interest in mortgages backing Ginnie Mae mortgage-backed securities extinguished by Ginnie Mae;
5. An individual or entity that is in violation of its neighborhood stabilizing outcome obligations or post-sale reporting requirements under a Conveyance, Assignment and Assumption Agreement executed for a past sale;
6. An employee of HUD's Office of Housing, a member of such employee's household, or an entity owned or controlled by any such employee or member of such an employee's household with household to be inclusive of the employee's father, mother, stepfather, stepmother, brother, sister, stepbrother, stepsister, son, daughter, stepson, stepdaughter, grandparent, grandson, granddaughter, father-in-law, mother-in-law, brother-in-law, sister-in-law, son-in-law, daughter-in-law, first cousin, the spouse of any of the foregoing, and the employee's spouse;
7. A contractor, subcontractor and/or consultant or advisor (including any

agent, employee, partner, director, or principal of any of the foregoing) who performed services for or on behalf of HUD in connection with the sale;

8. An individual or entity that knowingly acquired or will acquire prior to the sale date material non-public information, other than that information which is made available to Bidder by HUD pursuant to the terms of this Qualification Statement, about Mortgage Loans offered in the sale;

9. An individual or entity that knowingly uses the services, directly or indirectly, of any person or entity ineligible under 1 through 11 to assist in preparing any of its bids on the Mortgage Loans;

10. An individual or entity which knowingly employs or uses the services of an employee of HUD's Office of Housing (other than in such employee's official capacity); or

11. A Participating Servicer that contributed Mortgage Loans to a pool on which the Bidder is placing a bid.

The Qualification Statement has additional representations and warranties which the prospective bidder must make, including but not limited to the representation and warranty that the prospective bidder or its Related Entities are not and will not knowingly use the services, directly or indirectly, of any person or entity that is, any of the following (and to the extent that any such individual or entity would prevent Bidder from making the following representations, such individual or entity has been removed from participation in all activities related to this sale and has no ability to influence or control individuals involved in formation of a bid for this sale):

(1) An entity or individual is ineligible to bid on any included Mortgage Loan or on the pool containing such Mortgage Loan because it is an entity or individual that:

(a) Serviced or held any Mortgage Loan at any time during the two-year period prior to the bid, or

(b) Is any principal of any entity or individual described in the preceding sentence;

(c) Any employee or subcontractor of such entity or individual during that two-year period; or

(d) Any entity or individual that employs or uses the services of any other entity or individual described in this paragraph in preparing its bid on such Mortgage Loan.

Freedom of Information Act Requests

HUD reserves the right, in its sole and absolute discretion, to disclose information regarding ADPLS, including, but not limited to, the identity of any successful qualified bidder and its bid price or bid percentage for any pool of loans or individual loan, upon the closing of the sale of all the Mortgage Loans. Even if HUD elects not to publicly disclose any information relating to ADPLS, HUD will disclose any information that HUD is obligated to disclose pursuant to the Freedom of Information Act and all regulations promulgated thereunder.

Scope of Notice

This notice applies to ADPLS and does not establish HUD's policy for the sale of other mortgage loans.

Dated: May 11, 2016.

Edward L. Golding,

Principal Deputy Assistant Secretary for Housing.

[FR Doc. 2016–11616 Filed 5–16–16; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLNV912000. L12200000.PM0000 LXSS006F0000 261A; 14–1109; MO# 4500093084]

Notice of Public Meetings: Sierra Front-Northwestern Great Basin Resource Advisory Council, Nevada

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of public meetings.

SUMMARY: In accordance with the Federal Land Policy and Management Act (FLPMA) and the Federal Advisory Committee Act of 1972 (FACA), the U.S. Department of the Interior, Bureau of Land Management (BLM) Sierra Front-Northwestern Great Basin Resource Advisory Council (RAC), will hold two meetings in Nevada, in 2016. The meetings are open to the public.

DATES AND TIMES: June 2 and 3 at the BLM Winnemucca, Nevada District. A meeting will be held on Thursday, June 2, at the Winnemucca BLM District Office (5100 East Winnemucca Blvd.) in Winnemucca, Nevada. A field trip will be held on Friday, June 3 within the Winnemucca BLM District. The second meeting will be held August 11 and 12, at the BLM Carson City, Nevada District. A meeting will be held on Thursday, August 11, at the Carson City BLM District Office (5665 Morgan Mill Road) in Carson City, Nevada. A field trip will be held on Friday, August 12 within the Carson City BLM District. Approximate meeting times are 8 a.m. to 4 p.m. However, meetings could end earlier if discussions and presentations conclude before 4 p.m. The meetings will include a public comment period at approximately 8:30 a.m. and approximately 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Lisa Ross, Public Affairs Specialist, Carson City District Office, 5665 Morgan Mill Road, Carson City, NV 89701, telephone: (775) 885–6107, email: *lross@blm.gov.* Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to contact the above individual during normal business hours. The FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The 15-member Council advises the Secretary of the Interior, through the BLM, on a variety of planning and management issues associated with public land management in Nevada. Topics for discussion at the meeting will include, but are not limited to:

- June 2 & 3—landscape vegetative management, rangeland health assessments, Fire Invasive Assessment Tool (FIAT), sage grouse, drought, and fire restoration. Managers' reports of district office activities will be distributed at each meeting.
- August 11 & 12—Sage Grouse, Wild Horse & Burro, Land Health projects, Managers' report of district office activities will be distributed at each meeting.

The Council may raise other topics at the meetings.

Final agendas will be posted on-line at the BLM Sierra Front-Northwestern Great Basin RAC Web site at *http://www.blm.gov/nv/st/en/res/resource_advisory.html* and will be published in local and regional media sources at least 14 days before each meeting.

Individuals who need special assistance such as sign language interpretation or other reasonable accommodations, or who wish to receive a copy of each agenda, may contact Lisa Ross no later than 10 days prior to each meeting.

Steve Clutter,

Chief, Office of Communications.

[FR Doc. 2016–11572 Filed 5–16–16; 8:45 am]

BILLING CODE 4310–HC–P

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

[MMAA104000]

Notice on Outer Continental Shelf Oil and Gas Lease Sales

AGENCY: Bureau of Ocean Energy Management (BOEM), Interior.

ACTION: List of restricted joint bidders.

SUMMARY: Pursuant to the joint bidding provisions of 30 CFR 556.511, the Director of the Bureau of Ocean Energy Management is publishing a List of Restricted Joint Bidders. Each entity within one of the following groups is restricted from bidding with any entity in any of the other following groups at Outer Continental Shelf oil and gas lease sales to be held during the bidding period May 1, 2016, through October 31, 2016. This List of Restricted Joint Bidders will cover the period May 1, 2016, through October 31, 2016, and replace the prior list published on November 2, 2015, which covered the period of November 1, 2015, through April 30, 2016.

Group I
  BP America Production Company
  BP Exploration & Production Inc.
  BP Exploration (Alaska) Inc.
Group II
  Chevron Corporation
  Chevron U.S.A. Inc.
  Chevron Midcontinent, L.P.
  Unocal Corporation
  Union Oil Company of California
  Pure Partners, L.P.
Group III
  Eni Petroleum Co. Inc.
  Eni Petroleum US LLC
  Eni Oil US LLC
  Eni Marketing Inc.
  Eni BB Petroleum Inc.
  Eni US Operating Co. Inc.
  Eni BB Pipeline LLC
Group IV
  Exxon Mobil Corporation
  ExxonMobil Exploration Company
Group V
  Petroleo Brasileiro S.A.
  Petrobras America Inc.
Group VI
  Shell Oil Company
  Shell Offshore Inc.
  SWEPI LP
  Shell Frontier Oil & Gas Inc.
  SOI Finance Inc.
  Shell Gulf of Mexico Inc.
Group VII
  Statoil ASA
  Statoil Gulf of Mexico LLC
  Statoil USA E&P Inc.
  Statoil Gulf Properties Inc.
Group VIII
  Total E&P USA, Inc.

Dated: May 10, 2016.

Abigail Ross Hopper,

Director, Bureau of Ocean Energy Management.

[FR Doc. 2016–11596 Filed 5–16–16; 8:45 am]

BILLING CODE 4310–MR–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337–TA–951]

Certain Lithium Metal Oxide Cathode Materials, Lithium-Ion Batteries for Power Tool Products Containing Same, and Power Tool Products With Lithium-Ion Batteries Containing Same; Commission Determination To Review in Part a Final Initial Determination; Deny Certain Motions; and Grant a Request for a Commission Hearing; Request for Written Submissions on the Issues Under Review and on Remedy, the Public Interest and Bonding

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review in part the final initial determination ("ID") issued by the presiding administrative law judge ("ALJ") on February 29, 2016, finding a violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), as to the asserted patent claims in this investigation. The Commission has also determined to deny motions for intervention and to reopen the record. Pursuant to Commission Rule 210.45 (19 CFR 210.45), Respondents' request for a Commission hearing has been granted. A notice providing the scope and details of the hearing will be forthcoming.

FOR FURTHER INFORMATION CONTACT: Panyin A. Hughes, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone 202–205–3042. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone 202–205–2000. General information concerning the Commission may also be obtained by accessing its Internet server (*http://www.usitc.gov*). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov.* Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202–205–1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on March 30, 2015, based on a complaint filed by BASF Corporation of Florham Park, New Jersey and UChicago Argonne LLC of Lemont, Illinois (collectively, "Complainants"). 80 FR 16696 (Mar. 30, 2015). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain lithium metal oxide cathode materials, lithium-ion batteries for power tool products containing same, and power tool products with lithium-ion batteries containing same by reason of infringement of one or more of claims 1–4, 7, 13, and 14 of U.S. Patent No. 6,677,082 ("the '082 patent") and claims 1–4, 8, 9, and 17 of U.S. Patent No. 6,680,143 ("the '143 patent"). *Id.* The notice of investigation named the following respondents: Umicore N.V. of Brussels, Belgium; Umicore USA Inc. of Raleigh, North Carolina (collectively, "Umicore"); Makita Corporation of Anjo, Japan; Makita Corporation of America of Buford, Georgia; and Makita U.S.A. Inc. of La Mirada, California (collectively, "Makita"). *Id.* The Office of Unfair Import Investigations is a party to the investigation.

On November 5, 2015, the ALJ granted a joint motion by Complainants and Makita to terminate the investigation as to Makita based upon settlement. *See* Order No. 32 (Nov. 5, 2015). The Commission determined not to review. *See* Notice (Nov. 23, 2015).

On December 1, 2015, the ALJ granted an unopposed motion by Complainants to terminate the investigation as to claim 8 of the '082 patent. *See* Order No. 35 (Dec. 1, 2015). The Commission determined not to review Order No. 35. *See* Notice (Dec. 22, 2015).

On February 29, 2016, the ALJ issued his final ID, finding a violation of section 337 by Umicore in connection with claims 1–4, 7, 13, and 14 of the '082 patent and claims 1–4, 8, 9, and 17 of the '143 patent. Specifically, the ID found that the Commission has subject matter jurisdiction, *in rem* jurisdiction over the accused products, and *in personam* jurisdiction over Umicore. ID at 10–11. The ID found that Complainants satisfied the importation requirement of section 337 (19 U.S.C.

1337(a)(1)(B)). *Id.* at 9–10. The ID found that the accused products directly infringe asserted claims 1–4, 7, 13, and 14 of the '082 patent; and asserted claims 1–4, 8, 9, and 17 of the '143 patent, and that Umicore contributorily infringes those claims. *See* ID at 65–71, 83–85. The ID, however, found that Complainants failed to show that Umicore induces infringement of the asserted claims. *Id.* at 79–83. The ID further found that Umicore failed to establish that the asserted claims of the '082 or '143 patents are invalid for lack of enablement or incorrect inventorship. ID at 118–20. The ID also found that Umicore's laches defense fails as a matter of law (ID at 122–124) and also fails on the merits (ID at 124–126). Finally, the ID found that Complainants established the existence of a domestic industry that practices the asserted patents under 19 U.S.C. 1337(a)(2). *See* ID at 18, 24.

On March 14, 2016, Umicore filed a petition for review of the ID. Also on March 14, 2016, the Commission investigative attorney ("IA") petitioned for review of the ID's finding that a laches defense fails as a matter of law in section 337 investigations. Further on March 14, 2016, Complainants filed a contingent petition for review of the ID. That same day, Umicore filed a motion under Commission Rules 210.15(a)(2) and 210.38(a) (19 CFR 210.15(a)(2) and 210.38(a)), for the Commission to reopen the record in this investigation to admit a paper published on October 29, 2015, and a press release issued that day (collectively, "documents"). On March 22, 2016, the parties filed responses to the petitions for review. On March 24, 2016, Complainants and the IA filed oppositions to Umicore's motion to reopen the record. On April 5, 2016, Umicore moved for leave to file a reply. The Commission has determined to grant Umicore's motion for leave to file a reply.

On April 8, 2016, 3M Corporation ("3M") filed a motion to intervene under Commission Rule 210.19. 3M requests that the Commission grant it "with full participation rights in this Investigation in order to protect its significant interests in the accused materials."

Having examined the record of this investigation, including the final ID, the petitions for review, and the responses thereto, the Commission has determined to review the final ID in part. Specifically, the Commission has determined to review (1) the ID's contributory and induced infringement findings; (2) the ID's domestic industry findings under 19 U.S.C. 1337(a)(3)(C); and (3) the ID's findings on laches.

The Commission has determined to deny Umicore's motion to reopen the record to admit the documents. The Commission notes that the documents that Umicore seeks to introduce into evidence were available as of October 29, 2015, the last day of the hearing before the ALJ. Thus, Umicore could not have presented them prior to the hearing. Nothing, however, prevented Umicore from filing a timely motion under Commission Rule 210.42(g) requesting the ALJ to reopen the record and consider the documents prior to issuance of the final ID. The Commission notes that the final ID did not issue until February 29, 2016, four months after the documents were published. Yet, Umicore made no attempt to request the ALJ to consider the documents in the final ID. Thus, the Commission has determined to deny Umicore's motion to reopen the record at this late stage.

The Commission has determined to deny 3M's motion to intervene. The Commission notes that 3M filed a public interest statement on April 8, 2016, making substantially the same arguments it makes in its motion to intervene. The Commission will consider 3M's comments in considering remedy, bonding and the public interest this investigation if a violation of section 337 is found.

The parties are requested to brief their positions on the issues under review with reference to the applicable law and the evidentiary record. In connection with its review, the Commission is interested in responses to the following questions:

1. Please discuss whether laches should be an available defense in a section 337 investigation. In your response, please address how *SCA Hygiene Products* v. *First Quality Baby Prod.*, 807 F.3d 1311 (Fed. Cir. 2015), *cert. granted*, 578 U.S.____(May 2, 2016), applies and any statutory support for your position.

2. Please discuss whether a good faith belief of non-infringement negates a contributory infringement finding, where the accused products have no substantial non-infringing uses. In your response, please address the impact of the following cases: *Commil USA, LLC* v. *Cisco Sys., Inc.*, 135 S. Ct. 1920 (2015); *Global-Tech Appliances, Inc.* v. *SEB S.A.*, 131 S. Ct. 2060, 2068 (2011); *Spansion, Inc.* v. *International Trade Comm'n*, 629 F.3d 1331, 1359 (Fed. Cir. 2010); *Golden Blount, Inc.* v. *Robert H. Peterson Co.*, 438 F.3d 1354 (Fed. Cir. 2006).

3. Please point to evidence (or lack of evidence) showing that Umicore had a good faith belief of non-infringement, including evidence showing that Umicore relied upon that belief.

4. Please discuss in detail the extent to which an exclusion order would affect research and development efforts with respect to lithium ion batteries by universities and private companies. *See* Statement of Umicore S.A. And Umicore USA Inc. Regarding the Public Interest at 1 (Apr. 4, 2016). In your response, identify each university and private company engaged in such research and development efforts.

5. Please provide a detailed discussion of the record evidence as to whether Umicore's NMC material is uniquely suited for specific applications in energy saving technology, cutting-edge research and development, including identifying those specific areas and volumes involved and whether any other material can be used in such applications. *See* Statement of Umicore S.A. And Umicore USA Inc. Regarding the Public Interest at 1–2.

6. Please discuss whether each of the research companies and universities currently using Umicore NMC material (*See* Statement of Umicore S.A. And Umicore USA Inc. Regarding the Public Interest at 1–2) may also use materials from other sources for each of their specific research projects.

7. Please discuss whether NMC materials produced by other suppliers have lower performance characteristics and consistency. *See* Statement of Umicore S.A. And Umicore USA Inc. Regarding the Public Interest at 2–3.

8. Please discuss how the Umicore NMC material relates to 3M's research and whether other suppliers provide comparable material that 3M can use in its research. *See* 3M Company's Comments on the Effect on the Public Interest of the Proposed Remedy in the Recommended Determination (Apr. 8, 2016).

9. Please identify the suppliers of NMC to the U.S. market and the percentage of the market held by each.

Pursuant to Commission rule 210.45 (19 CFR 210.45), Umicore's request for a Commission hearing has been granted. A notice providing the scope and details of the hearing will be forthcoming.

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue one or more cease and desist orders that could result in the respondent being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, see *Certain Devices for Connecting Computers via Telephone*

Lines, Inv. No. 337–TA–360, USITC Pub. No. 2843 (December 1994) (Commission Opinion).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005. 70 FR 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

Written Submissions: The parties to the investigation are requested to file written submissions on the issues identified in this notice. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding. Complainants and the IA are requested to submit proposed remedial orders for the Commission's consideration. Complainants are also requested to state the date that the patents expire and the HTSUS numbers under which the accused products are imported. Complainants are further requested to supply the names of known importers of the Umicore products at issue in this investigation. The written submissions and proposed remedial orders must be filed no later than close of business on May 23, 2016. Reply submissions must be filed no later than the close of business on June 2, 2016. Opening submissions are limited to 50 pages. Reply submissions are limited to 25 pages. Such submissions should address the ALJ's recommended determinations on remedy and bonding. No further submissions on any of these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above and submit eight true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337–TA–951") in a prominent place on the cover page and/or the first page. (*See* Handbook for Electronic Filing Procedures, *http://www.usitc.gov/secretary/fed_reg_notices/rules/handbook_on_electronic_filing.pdf*). Persons with questions regarding filing should contact the Secretary (202–205–2000).

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. A redacted non-confidential version of the document must also be filed simultaneously with any confidential filing. All non-confidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

Issued: May 11, 2016.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2016–11563 Filed 5–16–16; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Antitrust Division

United States v. Charter Communications, Inc., et al.; Proposed Final Judgment and Competitive Impact Statement

Notice is hereby given pursuant to the Antitrust Procedures and Penalties Act, 15 U.S.C. 16(b)–(h), that a proposed Final Judgment, Stipulation, and Competitive Impact Statement have been filed with the United States District Court for the District of Columbia in *United States of America* v. *Charter Communications, Inc., et al.,* Civil Action No. 16–cv–00759. On April 25, 2016, the United States filed a Complaint alleging that Charter Communications, Inc.'s proposed acquisitions of Time Warner Cable Inc. and Bright House Networks, LLC would violate Section 7 of the Clayton Act, 15 U.S.C. 18. The proposed Final Judgment, filed at the same time as the Complaint, forbids the merged company from engaging in certain conduct that could make it more difficult for competing online video distributors (OVDs) to obtain programming content.

Copies of the Complaint, proposed Final Judgment, and Competitive Impact Statement are available for inspection on the Antitrust Division's Web site at *http://www.justice.gov/atr* and at the Office of the Clerk of the United States District Court for the District of Columbia. Copies of these materials may be obtained from the Antitrust Division upon request and payment of the copying fee set by Department of Justice regulations.

Public comment is invited within 60 days of the date of this notice. Such comments, including the name of the submitter, and responses thereto, will be posted on the Antitrust Division's Web site, filed with the Court, and, under certain circumstances, published in the **Federal Register**. Comments should be directed to Scott A. Scheele, Chief, Telecommunications and Media Enforcement Section, Antitrust Division, Department of Justice, 450 Fifth Street NW., Suite 7000, Washington, DC 20530 (telephone: 202–616–5924).

Patricia A. Brink,

Director of Civil Enforcement.

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

United States of America, Department of Justice, Antitrust Division, 450 5th Street N.W., Suite 7000, Washington, DC, 20530, Plaintiff, v., *Charter Communications, Inc., 400 Atlantic Street, Stamford, CT 06901, Time Warner Cable Inc., 60 Columbus Circle, New York, NY 10023, Advance/Newhouse Partnership, 5823 Widewaters Parkway, East Syracuse, NY 13057,* and, *Bright House Networks, LLC, 5823 Widewaters Parkway, East Syracuse, NY 13057,* Defendants.

Case No.: 1:16–cv–00759

Judge: Royce C. Lamberth

Filed: 04/25/2016

COMPLAINT

The United States of America, acting under the direction of the Attorney General of the United States, brings this civil antitrust action to enjoin the proposed combination of Charter Communications, Inc. ("Charter"), Time Warner Cable Inc. ("TWC"), and Advance/Newhouse Partnership's ("Advance/Newhouse") subsidiary, Bright House Networks, LLC ("BHN") (collectively referred to herein as "New Charter"), which would create the second-largest cable company and the third-largest multi-channel video distributor in the United States.

I. INTRODUCTION

1. Online video programming distributors ("OVDs") are beginning to revolutionize the way Americans receive and experience video content. With access to an adequate Internet connection, consumers can now choose among a number of OVDs to access collections of movies and television shows, including original content, at any time and on a device of their choosing. The early OVDs, such as Netflix, Hulu, and Amazon, focused on offering on-demand video to their customers and have developed video services that have already proven popular. Several newer OVDs, including DISH Network's Sling TV and Sony's Playstation Vue, have introduced services that offer live television channels in addition to on-demand content. And several television networks, including CBS, HBO, and Showtime, have launched OVD services to distribute their own programming over the Internet directly to subscribers. Continued growth of OVDs promises to deliver more competitive choices and a greater ability for consumers to customize their consumption of video content to their individual viewing preferences and budgets.

2. The emergence of OVDs threatens to upend the competitive landscape. For years, incumbent cable companies such as Comcast, TWC, and Charter have served the majority of American video households. Although these companies now face competition from the two direct broadcast satellite ("DBS") providers, DirecTV and DISH Network, and, in some areas, from telephone companies ("telcos") like AT&T and Verizon that also offer video services, all of these distributors—collectively referred to as multichannel video programming distributors ("MVPDs")—offer fairly similar products and pricing. Most notably, all of these MVPDs sell content to consumers primarily through large and costly video bundles that include hundreds of channels of programming that many customers neither desire nor watch.

3. In order for an OVD to successfully compete with the traditional MVPDs, it needs both the ability to reach consumers over the Internet and the ability to obtain programming from content providers that consumers will want to watch. Importantly, incumbent cable companies often can exert significant influence over one or both of these essential ingredients to an OVD's success, because they provide broadband connectivity that OVDs need to reach consumers and are also a critical distribution channel for the same video programmers that supply OVDs with video content. To the extent a transaction, such as the one at issue here, enhances an MVPD's ability or incentive to restrain OVDs' access to either of these critical inputs, and thus to prevent OVDs from becoming a meaningful new competitive option, consumers lose.

4. MVPDs have responded to the emergence of OVDs in various ways. Many MVPDs have sought to keep their customers from migrating some or all of their viewing to OVDs by taking steps to make their services more attractive to consumers, for example, by allowing their subscribers to receive programming over the Internet through Web sites or apps and providing expanded video-on-demand offerings. But some MVPDs have sought to restrain nascent OVD competition directly by exercising their leverage over video programmers to restrict the programmers' ability to license content to OVDs. To this end, some MVPDs have sought so-called Alternative Distribution Means ("ADM") clauses in their programming contracts that prohibit programmers from distributing content online, or have placed significant restrictions on online distribution. No MVPD has sought and obtained these restrictive ADMs as frequently, or as successfully, as TWC.

5. The combination of TWC with Charter and BHN will result in a larger MVPD with a greater ability and incentive to secure restrictions on programmers that limit or foreclose OVD access to important content. The Defendants, along with other MVPDs and OVDs, compete with one another as buyers of video content and serve as alternative distribution channels for national video programmers to build viewership scale. Since New Charter would have nearly 60 percent more subscribers than TWC standing alone, the merger will make New Charter a more vital distribution channel for these video programmers than each of the Defendants individually. Hence, as a result of the merger, New Charter will have greater bargaining leverage to insist that video programmers limit their distribution to OVDs.

6. In addition, with its much larger subscriber base, New Charter would gain significant additional benefits from impeding OVD competition. Today, Charter, TWC, and BHN each only act to protect its own MVPD profits. After the merger, however, New Charter would act to protect the much larger combined video revenues of all three Defendants. That is, while prior to the merger TWC has an incentive to obtain restrictive contract clauses to protect its $10.4 billion in video revenues, New Charter would have a much larger incentive to protect the Defendants' over $16 billion in aggregated video revenues.

7. With more to gain from imposing ADMs and other contractual restrictions and with greater bargaining leverage with programmers to insist on such provisions, New Charter will be well-positioned to restrain continued OVD growth by limiting or foreclosing OVD access to the video content that is vital to their competitiveness. Accordingly, the proposed combination of Charter, TWC, and BHN is likely to substantially lessen competition in the provision of video programming distribution in violation of Section 7 of the Clayton Act, 15 U.S.C. 18, and should be enjoined.

II. JURISDICTION AND VENUE

8. The United States brings this action under Section 15 of the Clayton Act, as amended, 15 U.S.C. 25, to prevent and restrain Charter, TWC, and BHN from violating Section 7 of the Clayton Act, 15 U.S.C. 18.

9. Defendants Charter, TWC, and BHN all provide video distribution services to programmers in the flow of interstate commerce, distributing video programming to millions of consumers in numerous states within the United States. Accordingly, Defendants' activities substantially affect interstate commerce. The Court has subject matter jurisdiction over this action and these Defendants pursuant to Section 15 of the Clayton Act, as amended, 15 U.S.C. 25, and 28 U.S.C. 1331, 1337(a), and 1345.

10. Defendants have consented to personal jurisdiction and venue in the District of Columbia for the purposes of this action.

III. THE PARTIES AND THE PROPOSED TRANSACTION

11. Defendant Charter is a Delaware corporation with headquarters in

Stamford, Connecticut. With over 4.2 million video subscribers across 28 states, Charter is the third-largest cable company in the United States (behind Comcast and TWC) and the sixth-largest MVPD in the nation. In 2014, Charter reported total revenues of around $9.1 billion. Nearly 49% of those revenues, around $4.4 billion, were derived from Charter's video business.

12. Defendant TWC is a New York corporation with headquarters in New York, New York. With over 10.8 million video subscribers across 30 states, TWC is the second-largest cable company in the United States (behind only Comcast), and the fourth-largest MVPD in the country. In 2014, TWC reported total revenues of approximately $22.8 billion. Around 45% of those revenues, or about $10.4 billion, were derived from TWC's video business.

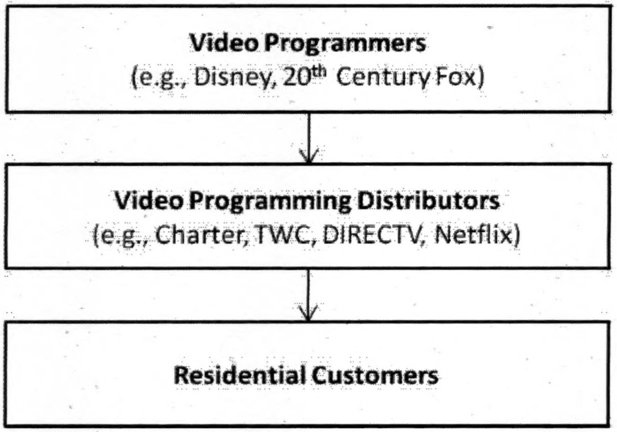
13. Defendant Advance/Newhouse is a New York partnership with headquarters in East Syracuse, New York, and the sole owner of Defendant BHN, a Delaware limited liability company headquartered in East Syracuse, New York. BHN is the sixth-largest cable company in the United States and the ninth-largest MVPD. BHN owns cable systems serving around 2 million video customers across six states. In 2014, BHN generated total revenues of around $3.7 billion, approximately $1.5 billion of which were derived from its video business.

14. On May 23, 2015, Charter, TWC, and Advance/Newhouse entered into a series of agreements that would combine Charter, TWC, and BHN into a single company, New Charter. Pursuant to these agreements, (1) Charter and TWC would merge in a transaction valued at over $78 billion; and (2) Charter would acquire BHN from Advance/Newhouse in a transaction valued at $10.4 billion. The combined entity would have nearly 17.4 million video subscribers across 41 states, making it the second-largest cable company and third-largest MVPD, accounting for nearly 18% of all MVPD subscribers in the United States.

IV. THE VIDEO PROGRAMMING DISTRIBUTION INDUSTRY

15. There are two distinct levels to the video programming distribution industry. At the "upstream" level, video programmers license their content to video programming distributors—both OVDs and traditional MVPDs including Charter, TWC, and BHN. At the "downstream" level, the video programming distributors then sell subscriptions to various packages of that content and deliver the content to residential customers.

The Video Programming Distribution Industry


Video Programmers
(e.g., Disney, 20th Century Fox)
Video Programming Distributors
(e.g., Charter, TWC, DIRECTV, Netflix)
Residential Customers

16. Video programmers produce themselves, or acquire from other copyright holders, a collection of professional, full-length programs and movies. These video programmers then typically aggregate this content into branded networks (*e.g.*, NBC, ESPN, or The History Channel) to create a 24-hour-per-day television service that is attractive to consumers. Many of the largest video programmers control the rights to multiple networks. Except for networks of purely local or regional interest, the video programmers will contract with video programming distributors across the country to distribute the content to consumers.

17. In order to acquire the rights to distribute each network, video programming distributors pay the video programmer a license fee. Generally, MVPDs and OVDs pay the video programmer a monthly per-subscriber fee. These license fees are an important revenue stream for video programmers. Most of the remainder of their revenues comes from fees for advertisements placed on their networks.

18. Video programmers rely on video programming distributors to reach consumers. Unless a video programmer obtains carriage in the packages of video programming distributors that reach a sufficient number of consumers, the programmers will be unable to earn enough revenue in licensing or to attract enough advertising revenue to generate a return on their investments in content. For this reason, video programmers prefer to have as many video programming distributors as possible carry their networks, and particularly seek out the largest MVPDs that reach the most customers. If the programmer is unable to agree on acceptable terms with a particular distributor, the programmer's content will not be available to that distributor's customers. This potential consequence gives the largest MVPDs significant bargaining leverage in their negotiations with programmers.

V. RELEVANT MARKET

19. The timely distribution of professional, full-length video programming to residential customers ("video programming distribution") constitutes a relevant product market and line of commerce under Section 7 of the Clayton Act, 15 U.S.C. 18. Both

MVPDs and OVDs are participants in this market.

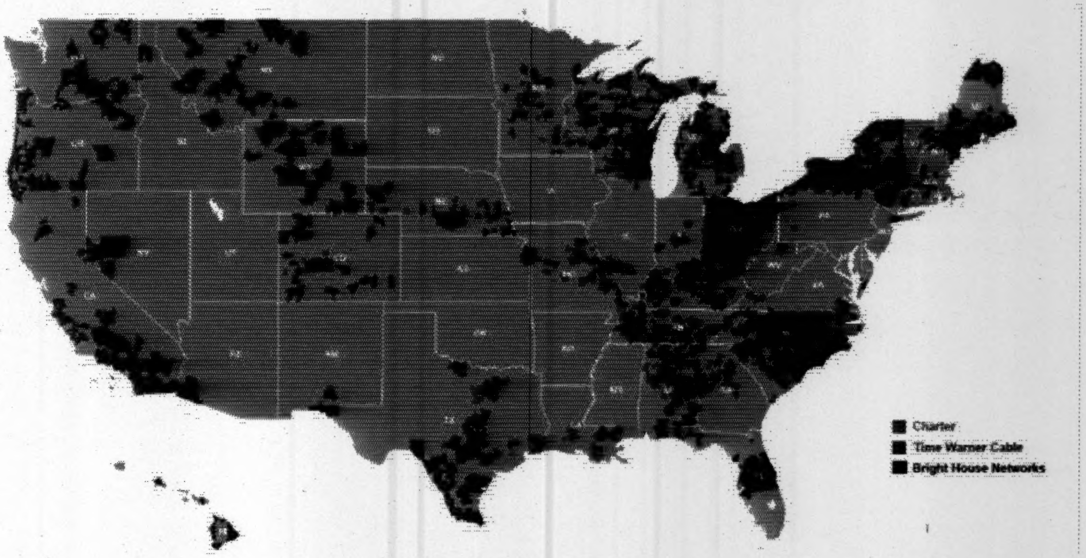
20. Video programming distribution is characterized by the aggregation and delivery of professionally produced content. This content includes scripted and unscripted television shows, live programming, sports, news, and movies licensed from a mixture of broadcast and cable networks, as well as from movie studios. Video programming can be viewed immediately by consumers, whether on demand or as scheduled.

21. Consumers purchase video programming distribution services from among those distributors that can offer such services directly to their home. The DBS operators, DirecTV and DISH, can reach almost any customer in the continental United States who has an unobstructed line of sight to their satellites. OVDs are available to any consumer with Internet service sufficient to deliver video of an acceptable quality. In contrast, wireline-based distributors such as cable companies and telcos generally must obtain a franchise from local, municipal, or state authorities in order to construct and operate a wireline network in a specific area, and then build lines to homes in that area. A consumer cannot purchase video programming distribution services from a wireline distributor operating outside its franchise area because the distributor does not have the facilities to reach the consumer's home. Thus, although the set of video programming distributors able to offer service to individual consumers' residences is generally the same within each local community, the set can differ from one local community to another.

22. Each local community whose residents face the same competitive choices in video programming distribution comprises a local geographic market and section of the country under Section 7 of the Clayton Act, 15 U.S.C. 18. A hypothetical monopolist of video programming distribution in any of these geographic areas could profitably raise prices by a small but significant, non-transitory amount.

23. The specific geographic markets relevant to this action are the numerous local markets throughout the United States shown in the map below where either Charter, TWC, or BHN is the incumbent cable operator.

Figure 1: Service Areas of Charter, TWC, and BHN



In order to protect its profits in these geographic markets, which cover around 48 million U.S. television households across 41 states, New Charter will have an incentive to prevent rival OVDs from obtaining, or to raise the costs of those rivals obtaining, programming for their services. Because these OVD competitors also serve homes outside New Charter's service areas, however, other local markets may be affected, with the anticompetitive effects of the transaction likely extending to the whole nation.

VI. MARKET CONCENTRATION

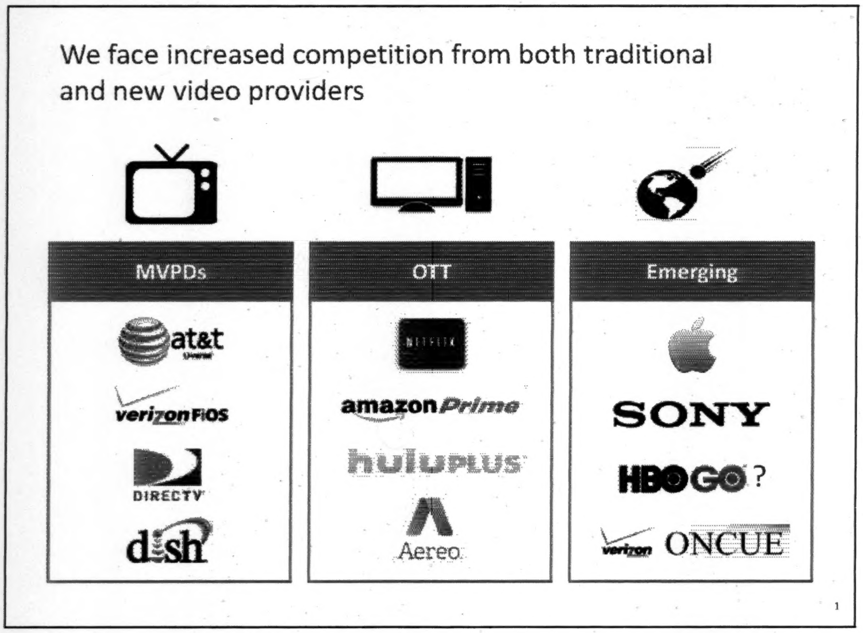
24. The incumbent cable companies typically have the highest share of subscribers within their respective service areas, often above 50 percent. The DBS providers, DirecTV and DISH, account for approximately one-third of the video programming distribution subscribers nationwide, although their shares vary by local market. The telcos, AT&T and Verizon, account for over 10 percent of video programming distribution nationwide and have successfully achieved penetration of up to 40 percent in some areas, but their video services remain limited to certain local markets and are unavailable to most American homes. In a handful of areas, other providers called "overbuilders" have constructed an additional wireline network to residential consumers, offering another competitive option for video and broadband service. But these overbuilders, including companies like RCN and Google Fiber, are available in very few communities, serving less than two percent of U.S. television households nationwide.

25. Although OVDs have acquired a significant number of customers over the last several years, they account for only five percent of total video programming distribution revenues. Nevertheless, established distributors such as Charter, TWC, and BHN view OVDs as a growing competitive threat and have taken steps to respond to OVD entry.

VII. ANTICOMPETITIVE EFFECTS

26. Charter, TWC, and BHN compete with DBS, overbuilder, and telco providers by upgrading their existing services, offering promotions and other price discounts, and introducing new product offerings. Consumers benefit from this competition by receiving better quality services, lower prices, and more programming choices. Competition between the incumbent cable companies and these alternative video providers has also fostered innovation, including the development of digital transmission, HD, and 4K programming, and the introduction of DVRs, video-on-demand, and ways to view content on other devices or away from home.

27. The continued development and expansion of OVDs could unlock additional competitive benefits. Today, many consumers purchase OVD services as a supplement to a traditional MVPD subscription. But in light of expanding OVD options, some consumers are switching from larger, more expensive MVPD bundles to slimmer and cheaper bundles. A small number of consumers are even "cutting the cord"—cancelling their MVPD subscription altogether and relying solely on one or more OVDs to receive content. And many younger consumers are emerging as "cord nevers" that do not seek out an MVPD subscription in the first place. Large cable companies such as Charter and TWC, which rely on their video businesses to deliver significant profit margins, have observed these developments with growing concern. In numerous internal documents, Defendants show a keen awareness of the competitive threat that OVDs pose. In fact, a TWC board presentation from February 2014 illustrated the threat posed by such emerging online competitors as a meteor speeding toward earth:



We face increased competition from both traditional and new video providers

MVPDs	OTT	Emerging
at&t U-verse	NETFLIX	
verizon FiOS	amazon Prime	SONY
DIRECTV	huluPLUS	HBO GO ?
dish	Aereo	verizon ONCUE

28. Because of the threat OVDs pose to their video business, some MVPDs have an incentive to engage in tactics that would diminish OVDs' ability to compete. TWC, in particular, has recognized that it can use its contracts with video programmers to try and foreclose OVD competitors from access to valuable content. TWC has been the most aggressive MVPD in the industry in seeking and obtaining restrictive contract provisions in its agreements with programmers that limit the programmer's ability to license programming to OVDs. Specifically, TWC has used the leverage that comes from its status as an important distribution channel for many video programmers to secure ADM provisions that either prevent the programmer from distributing its content online, or place certain restrictions on such online distribution. For example, some of TWC's ADMs prohibit any online distribution for a certain period of time; others prevent the programmers from distributing their content through OVDs that do not meet specific criteria that can be difficult for OVDs to satisfy (*e.g.*, requiring the OVD to include a minimum number of programming networks in its service).

29. Although they offer service to residential customers in different local areas, each of the Defendants serves as an alternative distribution channel for nationwide video programmers to deliver their content to consumers and to build national viewership scale. Video programmers rely on traditional MVPDs to provide licensing fees and to build a large viewership base that is attractive to advertisers. Post-merger, New Charter will become one of the largest MVPDs in the country and will serve as a critical distributor for video programmers, offering access to over 17 million customers spread across 41 states. As a result, New Charter will have more leverage to demand that video programmers agree to forego or limit the licensing of programming to OVDs.

30. In addition, New Charter will have greater incentive to engage in conduct designed to make OVDs less competitive because the merged firm will be significantly larger than any of the Defendants individually. Because New Charter will have far more subscribers, it will also stand to lose more profits as OVDs continue to take business from traditional video distributors. Today,

any conduct that Charter engages in to harm OVDs would only benefit Charter within its own service territory. After the merger, New Charter will internalize the combined benefits to Charter, TWC, and BHN of harming OVDs and therefore will have a greater incentive to do so, and will be willing to offer more consideration to video programmers to obtain licensing restrictions.

31. Restrictions imposed on video programmers by New Charter will likely make it more difficult for OVDs to obtain important content from programmers in the future. In order to comply with New Charter's restrictions, video programmers may have to effectively cease providing certain programming to an OVD altogether, or may be obligated to impose burdensome conditions on an OVD (such as the requirement to include a minimum number of programming networks in the service). Such actions could negatively affect OVDs' business models and undermine their ability to provide robust video offerings that compete with the offerings of traditional MVPDs. By limiting OVDs' access to content that is important to their customers, the competitiveness of OVDs will likely be diminished and consumers will likely receive lower-quality services and fewer choices.

VIII. ENTRY

32. Entry or expansion of traditional video programming distributors will not be timely, likely, or sufficient to reverse the competitive harm that would likely result from the proposed merger of Charter, TWC, and BHN. Entry and expansion in the traditional video programming distribution business is difficult and time-consuming because it requires an enormous upfront investment to create distribution infrastructure such as building out wireline facilities or launching satellites. Entry or expansion into a new geographic area also typically requires approval from one or more regulatory bodies.

33. OVDs are less likely to enter or expand to develop into significant competitors if denied access to popular content as a result of the proposed transaction.

IX. VIOLATION ALLEGED

34. The United States hereby incorporates paragraphs 1 through 33.

35. Defendants' proposed combination of Charter, TWC, and BHN would likely substantially lessen competition in the numerous geographic markets for video programming distribution identified above in violation of Section 7 of the Clayton Act, 15 U.S.C. 18.

36. Unless enjoined, the proposed transactions between Charter, TWC, and Advance/Newhouse would likely have the following anticompetitive effects, among others:

a. competition in the development, provision, and sale of video programming distribution services in each of the relevant geographic markets will likely be substantially lessened;

b. prices for video programming distribution services will likely increase to levels above those that would prevail absent the proposed transactions; and

c. innovation and quality of video programming distribution services will likely decrease to levels below those that would prevail absent the proposed transactions.

X. REQUESTED RELIEF

37. Plaintiff United States requests that this Court:

a. adjudge and decree that the proposed transactions violate Section 7 of the Clayton Act, 15 U.S.C. 18;

b. preliminarily and permanently enjoin the Defendants from carrying out the proposed transactions, or from entering into or carrying out any other agreement, understanding, or plan that would have the effect of bringing the video distribution businesses of Charter, TWC, and BHN under common ownership or control;

c. award the United States its costs in this action; and

d. award the United States such other and further relief as may be just and proper.

Dated: April 25, 2016.

Respectfully submitted,

For Plaintiff United States of America:

/s/ ________________

Renata B. Hesse (D.C. Bar #466107).

Principal Deputy Assistant Attorney General.

/s/ ________________

Patricia A. Brink,

Director of Civil Enforcement.

/s/ ________________

Scott A. Scheele (D.C. Bar #429061),

Chief, Telecommunications & Media Enforcement Section.

/s/ ________________

Lawrence M. Frankel (D.C. Bar #441532),

Assistant Chief, Telecommunications & Media Enforcement Section.

/s/ ________________

Robert A. Lepore*,
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**Attorney of Record*

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

United States of America, Plaintiff, v. *Charter Communications, Inc., Time Warner Cable Inc, Advance/Newhouse Partnership,* and *Bright House Networks, LLC,* Defendants.

Case No.: 1:16–cv–00759
Judge: Royce C. Lamberth
Filed: 05/10/2016

COMPETITIVE IMPACT STATEMENT

The United States of America ("United States"), pursuant to Section 2(b) of the Antitrust Procedures and Penalties Act ("APPA" or "Tunney Act"), 15 U.S.C. 16(b)–(h), files this Competitive Impact Statement relating to the proposed Final Judgment submitted for entry in this civil antitrust proceeding.

I. NATURE AND PURPOSE OF THE PROCEEDING

On May 23, 2015, Charter Communications, Inc. ("Charter") and Time Warner Cable, Inc. ("TWC"), two of the largest cable companies in the United States, agreed to merge in a deal valued at over $78 billion. In addition, Charter and Advance/Newhouse Partnership, which owns Bright House Networks, LLC ("BHN"), announced that Charter would acquire BHN for $10.4 billion, conditional on the sale of TWC to Charter. As a result of these transactions, the combined company, referred to as "New Charter," will become one of the largest providers of pay television service in the United States.

The United States filed a civil antitrust Complaint on April 25, 2016, seeking to enjoin the proposed transactions because their likely effect would be to lessen competition substantially in numerous local markets for the timely distribution of professional, full-length video programming to residential customers ("video programming distribution") throughout the United States in violation of Section 7 of the Clayton Act, 15 U.S.C. 18. Specifically, the Complaint alleges that the proposed merger would increase the ability and incentive of New Charter to use its leverage with video programmers to limit the access of online video distributors ("OVDs") to important content. These OVDs are increasingly offering meaningful competition to cable companies like Charter, and the loss of competition caused by the proposed merger likely would result in lower-quality services, fewer choices, and higher prices for consumers, as well as reduced investment and less innovation in this dynamic industry.

At the same time the Complaint was filed, the United States also filed a Stipulation and proposed Final Judgment, which are designed to eliminate the anticompetitive effects of the proposed merger. Under the proposed Final Judgment, which is explained more fully below, the Defendants will be prohibited from using their bargaining leverage with video programmers to inhibit the flow of video content to OVDs. The proposed Final Judgment will provide a prompt, certain, and effective remedy for consumers by preventing New Charter from using its leverage over programmers to harm competition. The United States and the Defendants have stipulated that the proposed Final Judgment may be entered after compliance with the APPA. Entry of the proposed Final Judgment would terminate this action, except that the Court would retain jurisdiction to construe, modify, or enforce the provisions of the proposed Final Judgment, and to punish and remedy violations thereof.

The proposed merger was also subject to review and approval by the Federal Communications Commission ("FCC").[1] On May 5, 2016, the FCC adopted an order approving the transactions subject to certain conditions discussed below, and that order was released publicly on May 10, 2016. The Department and the FCC coordinated closely in their reviews of the proposed merger. The FCC's remedy is independent of the proposed Final Judgment and not subject to review in this proceeding.

II. DESCRIPTION OF THE EVENTS GIVING RISE TO THE ALLEGED VIOLATION

A. The Defendants and the Proposed Merger

Charter is the third-largest cable company in the United States, and the sixth-largest multichannel video programming distributor ("MVPD") overall. Charter owns cable systems across 28 states, serving approximately 4.8 million residential broadband customers and 4.2 million residential video customers. Charter reported total revenues of around $9.1 billion in 2014, approximately $4.4 billion of which were derived from Charter's video business.

TWC is the second-largest cable company in the United States (behind only Comcast Corp.), and the fourth-largest MVPD in the country. TWC's cable systems serve approximately 11.7 million residential broadband and 10.8 million residential video customers in 30 states. TWC reported total revenues of approximately $22.8 billion in 2014, around $10.4 billion of which were derived from TWC's video business.

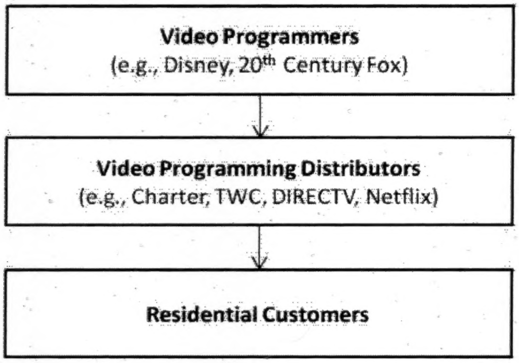
BHN is the sixth-largest incumbent cable company in the United States and the ninth-largest MVPD overall. It owns cable systems serving approximately 2 million video customers across six states, the majority of whom are located in the Orlando and Tampa-St. Petersburg, Florida areas. BHN is a wholly-owned subsidiary of Advance/Newhouse Partnership. Although the Advance/Newhouse Partnership retains the authority to manage BHN, it has entered into agreements by which TWC performs certain functions for BHN, including the procurement of cable programming. In 2014, BHN generated total revenues of around $3.7 billion, approximately $1.5 billion of which were derived from its video business.

The proposed transactions combining Charter, TWC, and BHN into New Charter, as initially agreed to by the Defendants on May 23, 2015, would lessen competition substantially in numerous local markets for video programming distribution. These transactions are the subject of the Complaint and proposed Final Judgment filed by the United States on April 25, 2016.

B. The Structure of the Video Programming Distribution Industry

The video programming distribution industry operates at two distinct levels. At the "upstream" level, video programmers license their content to video programming distributors—both OVDs and traditional MVPDs including Charter, TWC, and BHN. At the "downstream" level, the video programming distributors then sell subscriptions to various packages of that content and deliver the content to residential customers.

The Video Programming Distribution Industry


Video Programmers
(e.g., Disney, 20th Century Fox)
Video Programming Distributors
(e.g., Charter, TWC, DIRECTV, Netflix)
Residential Customers

1. Video Programmers

Video programmers produce themselves, or acquire from other copyright holders, a collection of professional, full-length programs and movies. These video programmers then typically aggregate this content into branded networks (*e.g.*, NBC or The History Channel) that provide a 24-hour schedule that is attractive to consumers. Large video programmers often own multiple individual networks. For instance, The Walt Disney Company owns the ABC broadcast network as well as many cable networks such as ESPN and The Disney Channel.

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[1] Under the Communications Act, the FCC has jurisdiction to determine whether mergers involving the transfer of a telecommunications license are in the "public interest, convenience, and necessity." 47 U.S.C. 310(d).

In order to acquire the rights to distribute each network, video programming distributors pay the video programmer a license fee, generally on a per-subscriber basis. These license fees are an important revenue stream for video programmers. Most of the remainder of their revenues comes from fees for advertisements placed on their networks.

Video programmers rely on video programming distributors—both MVPDs and OVDs—to reach consumers. Unless a video programmer obtains carriage in the packages of video programming distributors that reach a sufficient number of consumers, the programmers will be unable to earn enough revenue in licensing or to attract enough advertising revenue to generate a return on their investments in content. For this reason, video programmers prefer to have as many video programming distributors as possible carry their networks, and particularly seek out the largest MVPDs that reach the most customers. If the programmer is unable to agree on acceptable terms with a particular distributor, the programmer's content will not be available to that distributor's customers. This potential consequence gives the largest MVPDs significant bargaining leverage in their negotiations with programmers.

2. Multichannel Video Programming Distributors

Traditional video programming distributors include incumbent cable companies such as Charter and TWC; direct broadcast satellite ("DBS") providers such as DirecTV and DISH Network; telephone companies ("telcos") that offer video services such as Verizon and AT&T; and overbuilders such as Google Fiber and RCN.[2] These distributors are referred to collectively as MVPDs. MVPDs typically offer hundreds of channels of professional video programming to residential customers for a monthly subscription fee.

3. Online Video Programming Distributors

OVDs are relatively recent entrants into the video programming distribution market. They deliver a variety of live and/or on-demand video programming over the Internet, whether streamed to Internet-connected televisions or other devices, or downloaded for later viewing. OVDs today include services like Netflix, Hulu, Amazon Prime Instant Video, and Sling TV, although, as discussed in more detail below, their content selection and business models vary greatly. Unlike MVPDs, OVDs do not own distribution facilities and are dependent upon broadband Internet access service providers, including incumbent cable companies such as Charter and TWC, for the delivery of their content to viewers.

C. The Relevant Market and Market Concentration

The Complaint alleges that video programming distribution constitutes a relevant product market and line of commerce under Section 7 of the Clayton Act, 15 U.S.C. 18. The market for video programming distribution includes both traditional MVPDs and their newer OVD rivals.

Consumers purchase video programming distribution services from among those distributors that can offer such services directly to their home. The DBS operators, DirecTV and DISH, can reach almost any customer in the continental United States who has an unobstructed line of sight to their satellites. OVDs are available to any consumer with an Internet service sufficient to deliver video of an acceptable quality. In contrast, wireline-based distributors such as cable companies and telcos generally must obtain a franchise from local, municipal, or state authorities in order to construct and operate a wireline network in a specific area, and then build lines to homes in that area. A consumer cannot purchase video programming distribution services from a wireline distributor operating outside its franchise area because the distributor does not have the facilities to reach the consumer's home. Thus, although the set of video programming distributors able to offer service to individual consumers' residences is generally the same within each local community, the set can differ from one local community to another.

According to the Complaint, each local community whose residents face the same competitive choices in video programming distribution comprises a geographic market and section of the country under Section 7 of the Clayton Act, 15 U.S.C. 18. The geographic markets relevant to this action are the numerous local markets throughout the United States where either Charter, TWC, or BHN is the incumbent cable operator—an area encompassing 48 million U.S. television households located across 41 states. However, because OVDs typically offer services nationwide, the Complaint alleges that anticompetitive effects of the proposed merger likely extend to the entire United States.

The incumbent cable companies are often the largest video distribution provider in their respective local territories; the Defendants' market shares, for example, exceed 50 percent in many local markets in which they operate. The DBS providers, DirecTV and DISH Network, account for an average of about one third of video programming subscribers combined in any given local market. The telcos, including AT&T and Verizon, have market shares as high as 40 percent in the communities they have entered, but they are only available in limited areas and account for about 10 percent of video programming customers nationwide. Overbuilders such as Google Fiber can also have moderately high shares in particular local markets, but their services are only available in a small number of areas and they account for fewer than two percent of nationwide video programming distribution subscribers.

Although OVDs have acquired a significant number of customers over the last several years, most of these customers also purchase traditional MVPD subscriptions. As a result, OVDs currently have a small share of video programming distribution market revenues—likely around 5%.

D. Emerging Competition From OVDs in the Relevant Market

1. OVD Business Models and Participants

OVDs have developed a number of different business models for delivering content to consumers. Several OVDs, including Netflix, Amazon Prime Instant Video, and Hulu Plus, offer "subscription video on demand" ("SVOD") services where consumers typically obtain access to a wide library of movies, past-season television shows, and original content for a subscription fee.[3] In addition, some individual cable programmers, such as CBS and HBO, have begun offering their content directly to consumers on an SVOD basis. For example, HBO's service, branded HBO NOW, provides subscribers who pay a monthly fee with access to the same HBO content over the Internet that they would receive through a subscription to HBO as part of an MVPD package.

In contrast to these SVOD providers, a few OVDs have recently begun offering MVPD-like bundles of live, scheduled content to consumers over the Internet. In early 2015, DISH launched Sling TV, a monthly subscription service that provides customers access to many of the same cable networks that are available through traditional MVPDs. Sony has launched a similar service called PlayStation Vue. Unlike SVODs, these "virtual" MVPDs ("vMVPDs") provide customers the ability to watch live sports and news programming, as well as other scheduled entertainment programming, at the same time it is available on traditional MVPDs.

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[2] Overbuilders are providers who have constructed an additional wired network to residential consumers for offering video and broadband service (*i.e.*, they have "built over" the cable and phone company networks).

[3] Hulu also offers current-season content from various television networks on an ad-supported basis for no subscription fee.

2. The Effects of OVD Development on Traditional MVPDs

As OVDs have developed new business models and obtained a wider array of attractive video content, they have started to become closer substitutes for traditional MVPD services. Although many consumers treat OVD services as a complement to traditional MVPD service—for example, purchasing services from an SVOD like Netflix to access past season content and Netflix's original content but subscribing to an MVPD for live and current-season content—some are already using OVDs as substitutes for at least a portion of their video consumption. These consumers buy smaller content packages from traditional MVPDs, decline to take certain premium channels, or purchase fewer VOD offerings, and instead substitute content from OVDs, a practice known as "cord-shaving." In addition, a small, but growing number of MVPD customers are "cutting the cable cord" completely, using one or more OVDs as a replacement for their MVPD service. Finally, some younger consumers are emerging as "cord nevers" who do not seek out an MVPD subscription in the first place.

Absent interference from the established MVPDs, OVDs are likely to continue to grow, and to become stronger competitors to MVPDs. Moreover, to the extent that OVDs continue to develop services that more closely resemble those offered by traditional MVPDs, such as the live programming offered by vMVPDs or the current season content offered by certain SVODs, traditional MVPDs will likely face greater substitution to OVD services. To this end, the Defendants' internal documents show that they have typically been comparatively less concerned about competition from certain SVOD providers, like Netflix, that do not offer live or current-season programming, and more concerned by the threat posed by vMVPDs like Sling TV and SVODs like HBO NOW that offer current season content.

3. Traditional MVPDs' Responses to the Growth of OVDs

The Defendants and many other MVPDs recognize the threat that the growth of OVDs pose to their video distribution businesses. Numerous internal documents reflect the Defendants' assessment that OVDs are growing quickly and pose a competitive threat to traditional forms of video programming distribution. MVPDs have responded to this growth in various ways. To keep their customers from migrating some or all of their viewing to OVDs, many MVPDs, including the Defendants, have introduced new and less expensive packages with smaller numbers of channels, increased the amount of content available on an on-demand basis, and made content available to subscribers on devices other than traditional cable set-top boxes. At the same time, however, some MVPDs have sought to restrain nascent OVD competition directly by exercising their leverage over video programmers to restrict video programmers' ability to license content to OVDs. As alleged in the Complaint, and explained in more detail below, TWC has been an industry leader in seeking such restrictions, and the formation of New Charter will create an entity with an increased ability and incentive to do so.

E. The Anticompetitive Effects of the Proposed Merger

Although Defendants do not compete to provide video distribution services to consumers in the same local geographic markets, the Clayton Act is also concerned with mergers that threaten to reduce the number or quality of choices available to consumers by increasing the merging parties' incentive or ability to engage in conduct that would foreclose competition.[4] For example, a merger may create, or substantially enhance, the ability or incentive of the merged firm to protect its market power by denying or raising the price of an input to the firm's rivals.

As alleged in the Complaint, New Charter will be significantly larger than each of the Defendants individually, and thus will have a greater incentive and ability to use its bargaining power with video programmers to protect its market power in the local markets for video programming distribution. Specifically, following the merger, New Charter will be the one of the largest MVPDs in the country, with over 17 million subscribers in 41 states, and will therefore be a critical distribution channel for video programmers. The Complaint alleges that this greater scale will give New Charter more leverage to demand that programmers agree to limit their distribution to OVDs, enabling the merged firm to increase barriers to entry for OVDs or otherwise make OVDs less competitive.

The Complaint also alleges that New Charter will have increased incentive to engage in such behavior because it will stand to lose substantially more profits than Charter, TWC, and BHN individually if OVDs take business from traditional MVPDs, and it will internalize more of the benefits of harming OVDs. The Defendants' specific means for foreclosing OVDs—ADM clauses and other restrictive contracting provisions—are discussed in more detail below.

1. TWC Is the Industry Leader in Imposing ADMs and Other Restrictive Programming Clauses that Limit Video Programmers' Rights to License to OVDs

Video programmers sign lengthy licensing agreements with distributors that establish the terms on which the distributors will carry the programmers' networks. Sometimes, these licensing agreements include restrictions on the other distributors to whom the programmer may license content, or on other ways the programmer may make the content available to consumers. One type of restriction is often referred to in the industry as an "alternative distribution means" ("ADM") clause. ADM clauses take many forms, and in some cases can have significant consequences for programmers' ability to license to OVDs. For example, some ADMs prohibit a video programmer from licensing content to OVDs for an extended period of time after the content is first aired on traditional MVPDs—permanently blocking OVDs from being able to offer current-season content from those programmers. Other ADMs prohibit the programmer from licensing content to OVDs unless the OVDs meet a number of strict (and sometimes elaborate) criteria that can be difficult to satisfy.[5]

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[4] *See Brown Shoe Co.* v. *United States,* 370 U.S. 294, 317 (1962) (noting that the Clayton Act intended to make illegal "not only [] mergers between actual competitors, but also [] vertical and conglomerate mergers whose effect may tend to lessen competition in any line of commerce in any section of the country."); *FTC* v. *Procter & Gamble Co.,* 386 U.S. 568, 577 (1967) ("All mergers are within the reach of § 7, and all must be tested by the same standard, whether they are classified as horizontal, vertical, conglomerate.").

[5] For instance, an ADM in one MVPD's contract with a video programmer prohibited the programmer from licensing to any OVD unless that

TWC has been the most aggressive MVPD at seeking and obtaining restrictive ADM clauses in recent years. The Department's review of hundreds of programming contracts and ordinary course business documents revealed that TWC has obtained numerous ADMs that limit distribution to paid OVDs. Other distributors, by contrast, have rarely, if ever, sought or obtained such clauses, or have only obtained ADMs that are much less restrictive. TWC's success in seeking and obtaining ADMs is likely attributable in part to its bargaining leverage over video programmers; although such programmers might disfavor such restrictions because they require the programmer to forsake opportunities to earn revenues from OVDs, they are more likely to agree to a large MVPD such as TWC's demand to include them because they do not want to lose access to TWC's millions of cable subscribers.

The Department's investigation further suggested that TWC may be the most aggressive at obtaining such clauses because, other than Comcast, TWC has more to lose from the expansion of OVDs than any other traditional MVPD. Although Comcast also has substantial video profits at risk, it is prohibited from entering into or enforcing any provisions that restrict distribution to OVDs under the terms of a consent decree entered in *United States* v. *Comcast Corp.*[6] By contrast, distributors with fewer subscribers than TWC have less to lose from the expansion of OVDs, and, in some cases, may actually support OVD expansion because they make little or no profit margin on their video distribution businesses and would prefer to improve the attractiveness of their broadband Internet access services. Meanwhile, the two DBS providers, DISH and DirecTV, have historically been comparable to TWC in size, but because of their different distribution technology and their customer demographics, may perceive a lower threat from OVDs. In fact, DISH is offering an OVD service of its own—Sling TV—and DirecTV recently announced plans to offer a similar OVD service.

2. The Proposed Transaction Increases New Charter's Ability and Incentive To Obtain ADMs and Other Restrictive Programming Clauses

The number and scope of the ADMs that TWC obtained prior to the merger suggests that TWC believes that these ADM clauses are worth whatever consideration it must provide video programmers in return. After the merger, New Charter, with over 17 million video subscribers in 41 states, will have even more leverage than TWC to demand that programmers agree to ADMs. Given the importance of New Charter as a distribution channel, programmers will be less likely to risk losing access to New Charter's considerable subscriber base—which is almost 60 percent larger than TWC alone—and will be more likely to accept to New Charter's demands. Moreover, since New Charter will have far more profits at risk from increased OVD competition than Charter, TWC, or BHN standing alone, it will be willing to provide greater consideration to programmers to obtain such clauses. As a result, New Charter can be expected to seek and obtain ADMs with more programmers than TWC has to date, and the ADMs are likely to be more restrictive than TWC's current ADM provisions. As alleged in the Complaint, such ADMs could negatively affect OVDs' business models and undermine their ability to provide robust video offerings that compete with the offerings of traditional MVPDs. The weakening of OVD competition will result in lower-quality services, fewer consumer choices, and higher prices.

4. Entry Is Unlikely To Reverse the Anticompetitive Effects of the Proposed Merger

Successful entry into the traditional video programming distribution business is difficult and requires an enormous upfront investment to create a distribution infrastructure. As alleged in the Complaint, additional entry into wireline or DBS distribution is not likely to be significant for the next several years. Telcos have been willing to incur some of the enormous costs to modify their existing telephone infrastructure to distribute video, and will continue to do so, but only in certain areas. Other new providers, such as Google Fiber, are also expanding services, but the time and expense required to build to each new area makes expansion slow. Therefore, traditional MVPDs' market shares are likely to be fairly stable over the next several years.

OVDs represent the most likely prospect for successful and significant competitive entry into the existing video programming distribution market. However, in addition to the other barriers they face, OVDs must obtain access to a sufficient amount of content to become viable distribution businesses, and the proposed merger will likely increase that barrier to entry even further.

III. EXPLANATION OF THE PROPOSED FINAL JUDGMENT

The proposed Final Judgment ensures that New Charter will not impede competition by using programming contracts to prevent the flow of content to OVDs. The proposed Final Judgment thereby protects consumers by eliminating the likely anticompetitive effects of the proposed merger alleged in the Complaint.

A. The Proposed Final Judgment Prohibits Defendants From Limiting Distribution to OVDs Through Restrictive Licensing Practices

As discussed above, certain types of contract provisions, such as ADMs, can have the purpose and effect of limiting distribution to OVDs. However, not all provisions that limit distribution are anticompetitive. Reflecting this reality, Sections IV.A and IV.B of the proposed Final Judgment set forth broad prohibitions on restrictive contracting practices, while Section IV.C delineates a narrowly tailored set of exceptions. Taken together, these provisions ensure that New Charter cannot use restrictive contract terms to harm the development of OVDs, but preserve programmers' incentives to produce quality programming and New Charter's ability to compete with other distributors to obtain marquee content.

Section IV.A of the proposed Final Judgment prohibits New Charter from entering into or enforcing agreements that forbid, limit, or create incentives to limit the provision of video programming to OVDs. This language prevents New Charter from enforcing the ADM provisions in current TWC contracts, or from entering into new provisions.

Section IV.B provides additional detail as to the types of terms that could create "incentives to limit" distribution to OVDs. The Department's investigation revealed that TWC has obtained ADM provisions for the purpose of attempting to limit distribution to OVDs. However, once those agreements are prohibited, New Charter could substitute ADMs with more subtle types of contract provisions that do not directly limit distribution to

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OVD offered a package that included thirty-five channels, including at least two channels each from three out of a list of six large video programmers.

[6] *See* Final Judgment, *United States et al.* v. *Comcast et al.*, Civil Action No. 1:11cv–00106, 2011–2 Trade Cas. (CCH) ¶77,585, 2011 WL 5402137 (D.D.C. Sept. 1, 2011), *available at https://www.justice.gov/atr/case-document/file/492196/download.*

OVDs, but make it financially unattractive for video programmers to license content to OVDs. For instance, absent relief, New Charter could enter into an agreement that permits a video programmer to license content to an OVD, but specifies that so licensing will entitle New Charter to a massive license fee discount. To prevent evasion of the ban on ADMs, Section IV.B.1 clarifies that such "penalty" provisions that create incentives to limit distribution to OVDs are not permitted.

Alternatively, New Charter could enter into certain kinds of "most favored nation" ("MFN") provisions that are designed to create incentives to limit distribution to OVDs. Although MFN provisions are ubiquitous in the industry—for example, many MVPDs use MFN provisions entitling the MVPD to the lowest license fee that the programmer offers to any other MVPD—the Department's investigation revealed that some MVPDs were utilizing certain provisions that, while referred to as "MFNs," actually require much more than equal treatment. Specifically, some provisions, commonly referred to as "unconditional MFNs" or "cherry-picking MFNs," require that a programmer provide an MVPD the most favorable term the programmer has offered to any other distributor, even if that other distributor agreed to additional payment or other conditions in exchange for receiving that term.[7] As a result of an unconditional MFN, the programmer may be reluctant to license the additional content to the other distributor in the first place.

Although unconditional MFNs are uncommon today, and the Defendants have only a few such provisions in their current contracts, the Department was concerned that New Charter could replace ADMs with unconditional MFNs in an effort to circumvent the proposed Final Judgment. For example, New Charter might obtain an unconditional MFN from a programmer that would entitle New Charter to receive at no additional cost any content a programmer makes available to an OVD, regardless of payments or other conditions with which the OVD must comply. In such case, by providing programming to an OVD, the programmer might face significant economic disadvantages in the form of losing the opportunity to monetize the content through distribution by New Charter. As a result, unconditional MFNs could create significant disincentives for programmers to license content to OVDs. For these reasons, Section IV.B.2 of the proposed Final Judgment prohibits New Charter from entering into or enforcing unconditional MFNs against programmers for distributing their content to OVDs.[8]

Section IV.C of the proposed Final Judgment establishes three narrow exceptions to the broad prohibitions in Sections IV.A and IV.B. First, New Charter may prohibit the programmer from making content available on the Internet for free for 30 days after its initial airing, if New Charter has paid a fee for the video programming. The Department's investigation revealed that such limitations on free distribution are ubiquitous in the industry, and the Department has discovered no evidence that such provisions are harmful to competition.

Second, New Charter may enter into an agreement in which the programmer provides content exclusively to New Charter, and to no other MVPD or OVD. Although uncommon, a few programmers wish to make some of their content available to only one distributor. This relationship then incentivizes the distributor to vigorously market the content, and thus can be procompetitive in some circumstances. The proposed Final Judgment ensures that New Charter can continue to compete with other distributors to obtain these kinds of exclusives. As long as the exclusivity applies to *all* other video programming distributors, and does not narrowly prohibit distribution only to OVDs, the Department has no basis to believe such provisions will always or usually be harmful.[9]

Third, New Charter may condition carriage of programming on its cable system on terms which require it to receive as favorable material terms as other MVPDs or OVDs, except to the extent such terms would be inconsistent with the purpose of the proposed Final Judgment. That is, New Charter may enter into the kinds of ordinary conditional MFNs that are ubiquitous in the industry, such as a provision which entitles New Charter to the lowest license fee paid by any other distributor. This provision explicitly does not override Section IV.B.2's ban on the application of unconditional MFNs to OVD distribution. Importantly, New Charter may not use MFNs as a back door to obtain provisions which are otherwise "inconsistent with the purpose of Sections A and B." For instance, even if another distributor obtains a provision which "create[s] incentives to limit" a programmer's provision of programming to an OVD, New Charter cannot use an MFN to add that other distributor's provision to New Charter's own contract.

2. The Proposed Final Judgment Prohibits Defendants From Discriminating Against, Retaliating Against, or Punishing Video Programmers

Section IV.D of the proposed Final Judgment prohibits Defendants from discriminating against, retaliating against, or punishing any Video Programmer for providing programming to any OVD. This provision ensures that even though Defendants are no longer permitted to contractually prohibit or deter video programmers from licensing content to OVDs, the Defendants are not able to instead deter such licensing through threats or punishment. Section IV.D also prohibits Defendants from discriminating against, retaliating against, or punishing any video programmer for invoking any provisions of the proposed Final Judgment or any FCC rule or order, or for furnishing information to the Department concerning Defendants' compliance with the proposed Final Judgment.

Negotiations between video programmers and MVPDs are often contentious, high-stakes affairs, and it is common for one or both sides to the negotiation to threaten to walk away, or even to temporarily terminate the relationship (sometimes called a "blackout" or "going dark") in order to secure a better deal. The proposed Final Judgment is not concerned with such negotiating tactics and therefore clarifies that "[p]ursuing a more advantageous deal with a Video Programmer does not constitute discrimination, retaliation, or punishment." Rather, Section IV.D is designed to prevent situations where New Charter intentionally decides to forgo an agreement with a programmer that would otherwise be economical for New Charter in order to obtain the long-term benefits of deterring video programmers from licensing content to OVDs or cooperating with the Department or the FCC.

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[7] For example, a programmer may enter into an agreement with Distributor A that provides Distributor A with extra content (for instance, additional video-on-demand rights) in exchange for an extra payment. If the programmer has an unconditional MFN with Distributor B, the programmer may then be required to provide the additional video-on-demand rights to Distributor B *without Distributor B having to make the extra payment*. By contrast, a more typical—and less problematic—MFN would entitle Distributor B to the additional content only if Distributor B agreed to pay the same additional fee paid by Distributor A.

[8] Specifically, Section IV.B.2.i provides that New Charter may not require a programmer to provide New Charter the same terms offered to an OVD unless New Charter also accepts any conditions that are integrally related, logically linked, or directly tied to those terms. The language chosen for this provision mirrors language that is common in conditional MFN provisions throughout the industry. Also consistent with other conditional MFNs in the industry, Section IV.B.2.ii states that Charter need not comply with related terms and conditions if it is unable to do so for technological or regulatory reasons.

[9] The Department retains the authority to challenge under Sections 1 or 2 of the Sherman Act any exclusive agreement in the future that the evidence demonstrates unreasonably restrains trade or creates or enhances monopoly power. *See* Proposed Final Judgment at § VII (No Limitation of Government Rights).

3. Provision of Defendants' FCC Interconnection Reports

Although the Department's Complaint focuses on the likely competitive harm resulting from New Charter's imposition of ADMs and other contractual restrictions on video programmers, the Department also investigated the potential for the proposed merger to increase the price New Charter will charge Internet content companies, including OVDs, for access to its broadband subscribers. OVDs rely on broadband connections provided by other companies to reach their customers, and the Defendants are also major providers of Internet access service. Therefore, the Department examined whether the merger could increase both the incentive and ability of New Charter to use its control over the interconnection to New Charter's broadband Internet service provider network to try and disadvantage online video competitors.

The FCC's order approving the merger imposes an obligation on New Charter to make interconnection available on a non-discriminatory, settlement-free basis to any Internet content provider, transit provider, or content delivery network ("CDN") who meets certain basic criteria. Although this policy only directly protects those sending large volumes of traffic, even smaller sources who do not qualify for direct interconnection ought to find ample bandwidth available at competitive prices because large transit and CDN providers will be guaranteed access, and could resell that capacity. Thus, the Department expects that the FCC's order will prevent any merger-related harm to Internet content companies, including OVDs. In light of the FCC's remedy, the Department did not target interconnection in its Complaint and elected not to pursue duplicative relief with respect to interconnection in the proposed Final Judgment. However, in order to assist the Department in monitoring future developments with regard to interconnection and in taking whatever action might be appropriate to prevent anticompetitive conduct, Section IV.E requires New Charter to provide the Department with copies of the regular reports that New Charter furnishes to the FCC pursuant to the FCC's order.

D. Term of the Proposed Final Judgment

Section VIII of the proposed Final Judgment provides that the Final Judgment will expire seven years from the date of entry. The Department believes this time period is long enough to ensure that New Charter cannot harm OVD competitors at a crucial point in their development while accounting for the rapidly evolving nature of the video distribution market. After five years, Section VIII permits Charter to request that the Department reevaluate whether the Final Judgment remains necessary to protect competition. If at such time the Department concludes that the market has evolved such that the protections of the decree are no longer necessary, it will recommend to the Court that the Final Judgment be terminated.

IV. REMEDIES AVAILABLE TO POTENTIAL PRIVATE LITIGANTS

Section 4 of the Clayton Act, 15 U.S.C. 15, provides that any person who has been injured as a result of conduct prohibited by the antitrust laws may bring suit in federal court to recover three times the damages the person has suffered, as well as costs and reasonable attorneys' fees. Entry of the proposed Final Judgment will neither impair nor assist the bringing of any private antitrust damage action. Under the provisions of Section 5(a) of the Clayton Act, 15 U.S.C. 16(a), the proposed Final Judgment has no prima facie effect in any subsequent private lawsuit that may be brought against Defendants.

V. PROCEDURES AVAILABLE FOR MODIFICATION OF THE PROPOSED FINAL JUDGMENT

The United States and Defendants have stipulated that the proposed Final Judgment may be entered by the Court after compliance with the provisions of the APPA, provided that the United States has not withdrawn its consent. The APPA conditions entry upon the Court's determination that the proposed Final Judgment is in the public interest.

The APPA provides a period of at least 60 days preceding the effective date of the proposed Final Judgment within which any person may submit to the United States written comments regarding the proposed Final Judgment. Any person who wishes to comment should do so within 60 days of the date of publication of this Competitive Impact Statement in the **Federal Register**, or the last date of publication in a newspaper of the summary of this Competitive Impact Statement, whichever is later. All comments received during this period will be considered by the United States, which remains free to withdraw its consent to the proposed Final Judgment at any time prior to the Court's entry of judgment. The comments and the response of the United States will be filed with the Court. In addition, comments will be posted on the U.S. Department of Justice, Antitrust Division's internet Web site and, under certain circumstances, published in the **Federal Register**. Written comments should be submitted to:

Scott A. Scheele
Chief, Telecommunications and Media Enforcement Section
Antitrust Division
United States Department of Justice
450 Fifth Street NW., Suite 7000
Washington, DC 20530

The proposed Final Judgment provides that the Court retains jurisdiction over this action, and the parties may apply to the Court for any order necessary or appropriate for the modification, interpretation, or enforcement of the Final Judgment.

VI. ALTERNATIVES TO THE PROPOSED FINAL JUDGMENT

The United States considered, as an alternative to the proposed Final Judgment, seeking preliminary and permanent injunctions against Defendants' transactions and proceeding to a full trial on the merits. The United States is satisfied, however, that the relief in the proposed Final Judgment will preserve competition for the provision of video programming distribution services in the United States. Thus, the proposed Final Judgment would protect competition as effectively as would any remedy available through litigation, but avoids the time, expense, and uncertainty of a full trial on the merits.

VII. STANDARD OF REVIEW UNDER THE APPA FOR THE PROPOSED FINAL JUDGMENT

The Clayton Act, as amended by the APPA, requires that proposed consent judgments in antitrust cases brought by the United States be subject to a sixty-day comment period, after which the court shall determine whether entry of the proposed Final Judgment "is in the public interest." 15 U.S.C. 16(e)(1). In making that determination, the court, in accordance with the statute as amended in 2004, is required to consider:

> (A) the competitive impact of such judgment, including termination of alleged violations, provisions for enforcement and modification, duration of relief sought,

> anticipated effects of alternative remedies actually considered, whether its terms are ambiguous, and any other competitive considerations bearing upon the adequacy of such judgment that the court deems necessary to a determination of whether the consent judgment is in the public interest; and
>
> (B) the impact of entry of such judgment upon competition in the relevant market or markets, upon the public generally and individuals alleging specific injury from the violations set forth in the complaint including consideration of the public benefit, if any, to be derived from a determination of the issues at trial.

15 U.S.C. 16(e)(1)(A) & (B). In considering these statutory factors, the Court's inquiry is necessarily a limited one as the government is entitled to "broad discretion to settle with the defendant within the reaches of the public interest." *United States* v. *Microsoft Corp.*, 56 F.3d 1448, 1461 (D.C. Cir. 1995); *see generally United States* v. *SBC Commc'ns, Inc.*, 489 F. Supp. 2d 1 (D.D.C. 2007) (assessing public interest standard under the Tunney Act); *United States v, U.S. Airways Group, Inc.*, 38 F. Supp. 3d 69, 75 (D.D.C. 2014) (explaining that the "court's inquiry is limited" in Tunney Act settlements); *United States* v. *InBev N.V./S.A.*, No. 08–1965 (JR), 2009–2 Trade Cas. (CCH) ¶ 76,736, 2009 U.S. Dist. LEXIS 84787, at *3, (D.D.C. Aug. 11, 2009) (noting that the court's review of a consent judgment is limited and only inquires "into whether the government's determination that the proposed remedies will cure the antitrust violations alleged in the complaint was reasonable, and whether the mechanism to enforce the final judgment are clear and manageable.").[10]

As the United States Court of Appeals for the District of Columbia Circuit has held, under the APPA a court considers, among other things, the relationship between the remedy secured and the specific allegations set forth in the government's complaint, whether the decree is sufficiently clear, whether enforcement mechanisms are sufficient, and whether the decree may positively harm third parties. *See Microsoft*, 56 F.3d at 1458–62. With respect to the adequacy of the relief secured by the decree, a court may not "engage in an unrestricted evaluation of what relief would best serve the public." *United States* v. *BNS, Inc.*, 858 F.2d 456, 462 (9th Cir. 1988) (quoting *United States* v. *Bechtel Corp.*, 648 F.2d 660, 666 (9th Cir. 1981)); *see also Microsoft*, 56 F.3d at 1460–62; *United States* v. *Alcoa, Inc.*, 152 F. Supp. 2d 37, 40 (D.D.C. 2001); *InBev*, 2009 U.S. Dist. LEXIS 84787, at *3. Courts have held that:

> [t]he balancing of competing social and political interests affected by a proposed antitrust consent decree must be left, in the first instance, to the discretion of the Attorney General. The court's role in protecting the public interest is one of insuring that the government has not breached its duty to the public in consenting to the decree. The court is required to determine not whether a particular decree is the one that will best serve society, but whether the settlement is "*within the reaches of the public interest.*" More elaborate requirements might undermine the effectiveness of antitrust enforcement by consent decree.

Bechtel, 648 F.2d at 666 (emphasis added) (citations omitted).[11] In determining whether a proposed settlement is in the public interest, a district court "must accord deference to the government's predictions about the efficacy of its remedies, and may not require that the remedies perfectly match the alleged violations." *SBC Commc'ns*, 489 F. Supp. 2d at 17; *see also U.S. Airways*, 38 F. Supp. 3d at 75 (noting that a court should not reject the proposed remedies because it believes others are preferable); *Microsoft*, 56 F.3d at 1461 (noting the need for courts to be "deferential to the government's predictions as to the effect of the proposed remedies"); *United States* v. *Archer-Daniels-Midland Co.*, 272 F. Supp. 2d 1, 6 (D.D.C. 2003) (noting that the court should grant due respect to the United States' prediction as to the effect of proposed remedies, its perception of the market structure, and its views of the nature of the case).

Courts have greater flexibility in approving proposed consent decrees than in crafting their own decrees following a finding of liability in a litigated matter. "[A] proposed decree must be approved even if it falls short of the remedy the court would impose on its own, as long as it falls within the range of acceptability or is 'within the reaches of public interest.'" *United States* v. *Am. Tel. & Tel. Co.*, 552 F. Supp. 131, 151 (D.D.C. 1982) (citations omitted) (quoting *United States* v. *Gillette Co.*, 406 F. Supp. 713, 716 (D. Mass. 1975)), *aff'd sub nom. Maryland* v. *United States*, 460 U.S. 1001 (1983); *see also U.S. Airways*, 38 F. Supp. 3d at 76 (noting that room must be made for the government to grant concessions in the negotiation process for settlements (citing *Microsoft*, 56 F.3d at 1461); *United States* v. *Alcan Aluminum Ltd.*, 605 F. Supp. 619, 622 (W.D. Ky. 1985) (approving the consent decree even though the court would have imposed a greater remedy). To meet this standard, the United States "need only provide a factual basis for concluding that the settlements are reasonably adequate remedies for the alleged harms." *SBC Commc'ns*, 489 F. Supp. 2d at 17.

Moreover, the court's role under the APPA is limited to reviewing the remedy in relationship to the violations that the United States has alleged in its Complaint, and does not authorize the court to "construct [its] own hypothetical case and then evaluate the decree against that case." *Microsoft*, 56 F.3d at 1459; *see also U.S. Airways*, 38 F. Supp. 3d at 75 (noting that the court must simply determine whether there is a factual foundation for the government's decisions such that its conclusions regarding the proposed settlements are reasonable); *InBev*, 2009 U.S. Dist. LEXIS 84787, at *20 ("the 'public interest' is not to be measured by comparing the violations alleged in the complaint against those the court believes could have, or even should have, been alleged"). Because the "court's authority to review the decree depends entirely on the government's exercising its prosecutorial discretion by bringing a case in the first place," it follows that "the court is only authorized to review the decree itself," and not to "effectively redraft the complaint" to inquire into other matters that the United States did not pursue. *Microsoft*, 56 F.3d at 1459–60. As this Court confirmed in *SBC Communications*, courts "cannot look beyond the complaint in making the public interest determination unless the complaint is drafted so narrowly as to make a mockery of judicial power." *SBC Commc'ns*, 489 F. Supp. 2d at 15.

In its 2004 amendments, Congress made clear its intent to preserve the practical benefits of utilizing consent decrees in antitrust enforcement, adding the unambiguous instruction that "[n]othing in this section shall be construed to require the court to conduct an evidentiary hearing or to require the court to permit anyone to intervene." 15 U.S.C. 16(e)(2); *see also U.S. Airways*, 38 F. Supp. 3d at 76

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[10] The 2004 amendments substituted "shall" for "may" in directing relevant factors for courts to consider and amended the list of factors to focus on competitive considerations and to address potentially ambiguous judgment terms. *Compare* 15 U.S.C. 16(e) (2004), *with* 15 U.S.C. 16(e)(1) (2006); *see also SBC Commc'ns*, 489 F. Supp. 2d at 11 (concluding that the 2004 amendments "effected minimal changes" to Tunney Act review).

[11] *Cf. BNS*, 858 F.2d at 464 (holding that the court's "ultimate authority under the [APPA] is limited to approving or disapproving the consent decree"); *United States* v. *Gillette Co.*, 406 F. Supp. 713, 716 (D. Mass. 1975) (noting that, in this way, the court is constrained to "look at the overall picture not hypercritically, nor with a microscope, but with an artist's reducing glass"). *See generally Microsoft*, 56 F.3d at 1461 (discussing whether "the remedies [obtained in the decree are] so inconsonant with the allegations charged as to fall outside of the 'reaches of the public interest'").

(indicating that a court is not required to hold an evidentiary hearing or to permit intervenors as part of its review under the Tunney Act). The language wrote into the statute what Congress intended when it enacted the Tunney Act in 1974, as Senator Tunney explained: "[t]he court is nowhere compelled to go to trial or to engage in extended proceedings which might have the effect of vitiating the benefits of prompt and less costly settlement through the consent decree process." 119 Cong. Rec. 24,598 (1973) (statement of Sen. Tunney). Rather, the procedure for the public interest determination is left to the discretion of the court, with the recognition that the court's "scope of review remains sharply proscribed by precedent and the nature of Tunney Act proceedings." *SBC Commc'ns*, 489 F. Supp. 2d at 11.[12] A court can make its public interest determination based on the competitive impact statement and response to public comments alone. *U.S. Airways*, 38 F. Supp. 3d at 76.

VIII. DETERMINATIVE DOCUMENTS

Appendix B to the FCC's Memorandum Opinion and Order, *In re Applications of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership for Consent to the Transfer of Control of Licenses and Authorizations*, FCC MB Docket No. 15–149 (adopted May 5, 2016; released May 10, 2016), was the only determinative document or material within the meaning of the APPA considered by the Department in formulating the proposed Final Judgment. This document is available on the FCC's Web site at *https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-59A1.pdf*, and will also be made available on the Antitrust Division's Web site at *https://www.justice.gov/atr/case/us-v-charter-communications-inc-et-al.*

Dated: May 10, 2016

Respectfully submitted,

/s/ ______________________________

Robert A. Lepore,

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United States District Court for the District of Columbia

United States of America, Plaintiff, v. *Charter Communications, Inc., Time Warner Cable Inc, Advance/Newhouse Partnership, and Bright House Networks, LLC*, Defendants.

Case No.: 1:16–cv–00759

Judge: Royce C. Lamberth

Filed: 04/25/2016

[PROPOSED] FINAL JUDGMENT

WHEREAS, Plaintiff, the United States of America, filed its Complaint on April 25, 2016 alleging that Defendants propose to enter into transactions the likely effect of which would be to lessen competition substantially in the market for the timely distribution of professional, full-length video programming to residential customers ("video programming distribution") across the United States in violation of Section 7 of the Clayton Act, 15 U.S.C. 18, and Plaintiff and Defendants, by their respective attorneys, have consented to the entry of this Final Judgment without trial or adjudication of any issue of fact or law, and without this Final Judgment constituting any evidence against or admission by any party regarding any issue of fact or law;

AND WHEREAS, Defendants agree to be bound by the provisions of this Final Judgment pending its approval by the Court;

AND WHEREAS, Plaintiff requires Defendants to agree to undertake certain actions and refrain from certain conduct for the purpose of remedying the loss of competition alleged in the Complaint;

AND WHEREAS, Defendants have represented to the United States that the actions and conduct restrictions can and will be undertaken and that Defendants will later raise no claim of hardship or difficulty as grounds for asking the Court to modify any of the provisions contained below;

NOW THEREFORE, before any testimony is taken, without trial or adjudication of any issue of fact or law, and upon consent of the parties, it is ORDERED, ADJUDGED, AND DECREED:

I. JURISDICTION

This Court has jurisdiction over the subject matter of and each of the parties to this action. The Complaint states a claim upon which relief may be granted against Defendants under Section 7 of the Clayton Act, as amended, 15 U.S.C. 18.

II. DEFINITIONS

As used in this Final Judgment:

A. "Advance/Newhouse" means defendant Advance/Newhouse Partnership, a New York partnership with headquarters in East Syracuse, New York, its successors and assigns, and its Subsidiaries, divisions, groups, affiliates, partnerships and joint ventures, and their directors, officers, managers, agents, and employees, in their capacity as directors, officers, managers, agents, and employees of the foregoing.

B. "Bright House" means defendant Bright House Networks, LLC, a Delaware limited liability company with headquarters in East Syracuse, New York, its successors and assigns, and its Subsidiaries, divisions, groups, affiliates, partnerships and joint ventures, and their directors, officers, managers, agents, and employees, in their capacity as directors, officers, managers, agents, and employees of the foregoing.

C. "Charter" means defendant Charter Communications, Inc., a Delaware corporation with headquarters in Stamford, Connecticut, its successors and assigns (including, without limitation, CCH I, LLC), and its Subsidiaries, divisions, groups, affiliates, partnerships and joint ventures, and their directors, officers, managers, agents, and employees, in their capacity as directors, officers, managers, agents, and employees of the foregoing.

D. "Defendants" means Charter, TWC, Bright House, and Advance/Newhouse, acting individually or collectively. Notwithstanding the foregoing, Advance/Newhouse is not a "Defendant" for purposes of Section IV.

E. "Department of Justice" means the United States Department of Justice Antitrust Division.

F. "MVPD" means a multichannel video programming distributor as that term is defined on the date of entry of this Final Judgment in 47 CFR 76.1200(b), in its capacity as an MVPD.

G. "OVD" means any service that (1) distributes Video Programming in the United States by means of the Internet; (2) is not a component of an MVPD subscription; and (3) is not solely available to customers of an Internet access service owned or operated by the Person providing the service or an affiliate of the Person providing the service. For avoidance of doubt, this definition (1) includes a service offered by a Video Programmer for the distribution of its own Video

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[12] *See United States* v. *Enova Corp.*, 107 F. Supp. 2d 10, 17 (D.D.C. 2000) (noting that the "Tunney Act expressly allows the court to make its public interest determination on the basis of the competitive impact statement and response to comments alone"); *United States* v. *Mid-Am. Dairymen, Inc.*, No. 73–CV–681–W–1, 1977–1 Trade Cas. (CCH) ¶ 61,508, at 71,980, *22 (W.D. Mo. 1977) ("Absent a showing of corrupt failure of the government to discharge its duty, the Court, in making its public interest finding, should . . . carefully consider the explanations of the government in the competitive impact statement and its responses to comments in order to determine whether those explanations are reasonable under the circumstances."); S. Rep. No. 93–298, at 6 (1973) ("Where the public interest can be meaningfully evaluated simply on the basis of briefs and oral arguments, that is the approach that should be utilized.").

Programming by means of the Internet to Persons other than subscribers of an MVPD service; (2) includes a service offered by an MVPD that offers Video Programming by means of the Internet outside its MVPD service territory as a service separate and independent of an MVPD subscription; and (3) excludes an MVPD that offers Video Programming by means of the Internet to homes inside its MVPD service territory as a component of an MVPD subscription.

H. "Person" means any natural person, corporation, company, partnership, joint venture, firm, association, proprietorship, agency, board, authority, commission, office, or other business or legal entity, whether private or governmental.

I. "Subsidiary" refers to any Person in which there is partial (25 percent or more) or total ownership or control between the specified Person and any other Person. Notwithstanding the foregoing, Subsidiary shall not include any Person in which a Defendant does not have majority ownership or de facto control if that Person does not provide MVPD service.

J. "TWC" means defendant Time Warner Cable Inc, a New York corporation with headquarters in New York, New York, its successors and assigns, and its Subsidiaries, divisions, groups, affiliates, partnerships and joint ventures, and their directors, officers, managers, agents, and employees, in their capacity as directors, officers, managers, agents, and employees of the foregoing.

K. "Video Programmer" means any Person that provides Video Programming for distribution through MVPDs, in its capacity as a Video Programmer.

L. "Video Programming" means programming provided by, or generally considered comparable to programming provided by, a television broadcast station or cable network, regardless of the medium or method used for distribution, and, without expanding the foregoing, includes programming prescheduled by the programming provider (also known as scheduled programming or a linear feed); programming offered to viewers on an on-demand, point-to-point basis (also known as video on demand); pay per view or transactional video on demand; short programming segments related to other full-length programming (also known as clips); programming that includes multiple video sources (also known as feeds, including camera angles); programming that includes video in different qualities or formats (including high-definition and 3D); and films for which a year or more has elapsed since their theatrical release.

III. APPLICABILITY

This Final Judgment applies to Defendants and all other Persons in active concert or participation with any of them who receive actual notice of this Final Judgment by personal service or otherwise.

IV. PROHIBITED CONDUCT AND REPORTING

A. Defendants shall not enter into or enforce any agreement with a Video Programmer under which Defendants forbid, limit, or create incentives to limit the Video Programmer's provision of its Video Programming to one or more OVDs.

B. Agreements that "create incentives to limit" a Video Programmer's provision of its Video Programming to one or more OVDs within the meaning of Section IV.A shall include, but are not limited to, the following:

1. agreements that provide for any pecuniary or non-pecuniary penalty on the Video Programmer for the provision of its Video Programming to an OVD, such as rate reductions, re-tiering or re-positioning penalties, termination rights for Defendants, or loss or waiver of any rights or benefits otherwise available to the Video Programmer; or

2. agreements that entitle Defendants to receive any benefits such as favorable rates, contract terms, or content rights offered or granted to an OVD by a Video Programmer without requiring Defendants to also accept any obligations, limitations, or conditions:

i. that are integrally related, logically linked, or directly tied to the offering or grant of such rights or benefits, and

ii. with which Defendants can reasonably comply technologically and legally. For avoidance of doubt, Defendants will be deemed able to "reasonably comply technologically" if they are able to implement an obligation, limitation, or condition in a technologically equivalent manner.

C. Notwithstanding the foregoing, nothing in this Final Judgment shall prohibit Defendants from:

1. entering into and enforcing an agreement under which Defendants discourage or prohibit a Video Programmer from making Video Programming for which Defendants pay available to consumers for free over the Internet within the first 30 days after Defendants first distribute the Video Programming to consumers;

2. entering into and enforcing an agreement under which the Video Programmer provides Video Programming exclusively to Defendants, and to no other MVPD or OVD; or

3. entering into and enforcing an agreement which requires that Defendants receive as favorable material terms as other MVPDs or OVDs, except to the extent application of other MVPDs' or OVDs' terms would be inconsistent with the purpose of Sections A and B of this Section IV.

D. Defendants shall not discriminate against, retaliate against, or punish any Video Programmer (i) for providing Video Programming to any MVPD or OVD, (ii) for invoking any provisions of this Final Judgment, (iii) for invoking the provisions of any rules or orders concerning Video Programming adopted by the Federal Communications Commission, or (iv) for furnishing information to the United States concerning Defendants' compliance or noncompliance with this Final Judgment. Pursuing a more advantageous deal with a Video Programmer does not constitute discrimination, retaliation, or punishment.

E. Defendants shall submit to the Department of Justice all reports and data relating to interconnection with the Defendants' broadband Internet access network that are required to be submitted to the Federal Communications Commission ("the Commission") pursuant to any rule or order of the Commission, at the same time such reports or data are required to be submitted to the Commission.

V. COMPLIANCE INSPECTION

A. For purposes of determining or securing compliance with this Final Judgment, or of determining whether the Final Judgment should be modified or vacated, and subject to any legally recognized privilege, from time to time duly authorized representatives of the Department of Justice, including consultants and other persons retained by the Department of Justice, shall, upon written request of an authorized representative of the Assistant Attorney General in charge of the Antitrust Division, and on reasonable notice to Defendants, be permitted:

1. access during the Defendants' office hours to inspect and copy, or at the option of the United States, to require Defendants to provide to the United States hard copy or electronic copies of, all books, ledgers, accounts, records, data, and documents in the possession, custody, or control of Defendants, relating to any matters contained in this Final Judgment; and

2. to interview, either informally or on the record, the Defendants' officers, employees, or agents, who may have

their individual counsel present, regarding such matters. The interviews shall be subject to the reasonable convenience of the interviewee and without restraint or interference by Defendants.

B. Upon the written request of an authorized representative of the Assistant Attorney General in charge of the Antitrust Division, Defendants shall submit written reports or respond to written interrogatories, under oath if requested, relating to any of the matters contained in this Final Judgment as may be requested.

C. No information or documents obtained by the means provided in this section shall be divulged by the United States to any person other than an authorized representative of the executive branch of the United States or the Federal Communications Commission, except in the course of legal proceedings to which the United States is a party (including grand jury proceedings), or for the purpose of securing compliance with this Final Judgment, or as otherwise required by law.

D. If at the time information or documents are furnished by a Defendant to the United States, the Defendant represents and identifies in writing the material in any such information or documents to which a claim of protection may be asserted under Rule 26(c)(1)(G) of the Federal Rules of Civil Procedure, and the Defendant marks each pertinent page of such material, "Subject to claim of protection under Rule 26(c)(1)(G) of the Federal Rules of Civil Procedure," then the United States shall give the Defendant ten calendar days notice prior to divulging such material in any civil or administrative proceeding (other than a grand jury proceeding).

VI. RETENTION OF JURISDICTION

This Court retains jurisdiction to enable any party to apply to this Court at any time for further orders and directions as may be necessary or appropriate to carry out or construe this Final Judgment, to modify any of its provisions, to enforce compliance, and to punish violations of its provisions.

VII. NO LIMITATION ON GOVERNMENT RIGHTS

Nothing in this Final Judgment shall limit the right of the United States to investigate and bring actions to prevent or restrain violations of the antitrust laws concerning any past, present, or future conduct, policy, or practice of the Defendants.

VIII. EXPIRATION OF FINAL JUDGMENT

This Final Judgment shall expire seven years from the date of its entry. Notwithstanding the foregoing, the Defendants may request after five years that the Department of Justice examine competitive conditions and determine whether the Final Judgment continues to be necessary to protect competition. If after examination of competitive conditions the Department of Justice in its sole discretion concludes that the Final Judgment should be terminated, it will recommend to the Court that the Final Judgment be terminated.

IX. PUBLIC INTEREST DETERMINATION

Entry of this Final Judgment is in the public interest. The parties have complied with the requirements of the Antitrust Procedures and Penalties Act, 15 U.S.C. 16, including making copies available to the public of this Final Judgment, the Competitive Impact Statement, and any comments thereon and the United States' responses to comments. Based upon the record before the Court, which includes the Competitive Impact Statement and any comments and response to comments filed with the Court, entry of this Final Judgment is in the public interest.

Date: ____________________

Court approval subject to procedures set forth in the Antitrust Procedures and Penalties Act, 15 U.S.C. 16

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United States District Judge

[FR Doc. 2016–11562 Filed 5–16–16; 8:45 am]

BILLING CODE 4410–11–P

DEPARTMENT OF LABOR

Employee Benefits Security Administration

181st Meeting of the Advisory Council on Employee Welfare and Pension Benefit Plans Notice of Meeting

Pursuant to the authority contained in section 512 of the Employee Retirement Income Security Act of 1974 (ERISA), 29 U.S.C. 1142, the 181st meeting of the Advisory Council on Employee Welfare and Pension Benefit Plans (also known as the ERISA Advisory Council) will be held on June 7–9, 2016.

The three-day meeting will take place at the U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210 in C5320 Room 6. The meeting will run from 9:00 a.m. to approximately 5:30 p.m. on June 7–8 and from 8:30 a.m. to 3:00 p.m. on June 9, with a one hour break for lunch each day. The purpose of the open meeting is for Advisory Council members to hear testimony from invited witnesses and to receive an update from the Employee Benefits Security Administration (EBSA). The EBSA update is scheduled for the morning of June 9, subject to change.

The Advisory Council will study the following topics: (1) Cybersecurity Considerations for Benefit Plans, on June 7 and (2) Participant Plan Transfers and Account Consolidation for the Advancement of Lifetime Plan Participation, on June 8. The schedule is subject to change. The Council will discuss both topics on June 9. Descriptions of these topics are available on the Advisory Council page of the EBSA Web site, at *www.dol.gov/ebsa/aboutebsa/erisaadvisorycouncil.html.*

Organizations or members of the public wishing to submit a written statement may do so by submitting 35 copies on or before May 31, 2016 to Larry Good, Executive Secretary, ERISA Advisory Council, U.S. Department of Labor, Suite N–5623, 200 Constitution Avenue NW., Washington, DC 20210. Statements also may be submitted as email attachments in word processing or pdf format transmitted to *good.larry@dol.gov.* It is requested that statements not be included in the body of the email. Statements deemed relevant by the Advisory Council and received on or before May 31 will be included in the record of the meeting and made available through the EBSA Public Disclosure Room, along with witness statements. Do not include any personally identifiable information (such as name, address, or other contact information) or confidential business information that you do not want publicly disclosed. Written statements submitted by invited witnesses will be posted on the Advisory Council page of the EBSA Web site, without change, and can be retrieved by most Internet search engines.

Individuals or representatives of organizations wishing to address the Advisory Council should forward their requests to the Executive Secretary or telephone (202) 693–8668. Oral presentations will be limited to 10 minutes, time permitting, but an extended statement may be submitted for the record. Individuals with disabilities who need special accommodations should contact the Executive Secretary by May 31.

Signed at Washington, DC, this 9th day of May, 2016.

Judy Mares,

Deputy Assistant Secretary, Employee Benefits Security Administration.

[FR Doc. 2016–11612 Filed 5–16–16; 8:45 am]

BILLING CODE 4510–29–P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

[Docket No. OSHA–2013–0016]

Nemko-CCL, Inc.: Applications for Expansion of Recognition

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Notice.

SUMMARY: In this notice, OSHA announces the applications of Nemko-CCL, Inc. for expansion of its scope of recognition as a Nationally Recognized Testing Laboratory (NRTL) and presents the Agency's preliminary finding to grant the applications.

DATES: Submit comments, information, and documents in response to this notice, or requests for an extension of time to make a submission, on or before June 1, 2016.

ADDRESSES: Submit comments by any of the following methods:

1. *Electronically:* Submit comments and attachments electronically at *http://www.regulations.gov,* which is the Federal eRulemaking Portal. Follow the instructions online for making electronic submissions.

2. *Facsimile:* If submissions, including attachments, are not longer than 10 pages, commenters may fax them to the OSHA Docket Office at (202) 693–1648.

3. *Regular or express mail, hand delivery, or messenger (courier) service:* Submit comments, requests, and any attachments to the OSHA Docket Office, Docket No. OSHA–2013–0016, Technical Data Center, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–2625, Washington, DC 20210; telephone: (202) 693–2350 (TTY number: (877) 889–5627). Note that security procedures may result in significant delays in receiving comments and other written materials by regular mail. Contact the OSHA Docket Office for information about security procedures concerning delivery of materials by express mail, hand delivery, or messenger service. The hours of operation for the OSHA Docket Office are 8:15 a.m.–4:45 p.m., e.t.

4. *Instructions:* All submissions must include the Agency name and the OSHA docket number OSHA–2013–0016. OSHA places comments and other materials, including any personal information, in the public docket without revision, and these materials will be available online at *http://www.regulations.gov.* Therefore, the Agency cautions commenters about submitting statements they do not want made available to the public, or submitting comments that contain personal information (either about themselves or others) such as Social Security numbers, birth dates, and medical data.

5. *Docket:* To read or download submissions or other material in the docket, go to *http://www.regulations.gov* or the OSHA Docket Office at the address above. All documents in the docket are listed in the *http://www.regulations.gov* index; however, some information (*e.g.*, copyrighted material) is not publicly available to read or download through the Web site. All submissions are available for inspection at the OSHA Docket Office. Contact the OSHA Docket Office for assistance in locating docket submissions.

6. *Extension of comment period:* Submit requests for an extension of the comment period on or before June 1, 2016 to the Office of Technical Programs and Coordination Activities, Directorate of Technical Support and Emergency Management, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–3655, Washington, DC 20210, or by fax to (202) 693–1644.

FOR FURTHER INFORMATION CONTACT: Information regarding this notice is available from the following sources:

Press inquiries: Contact Mr. Frank Meilinger, Director, OSHA Office of Communications, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–3647, Washington, DC 20210; phone: (202) 693–1999; email: *meilinger.francis2@dol.gov.*

General and technical information: Contact Mr. Kevin Robinson, Director, Office of Technical Programs and Coordination Activities, Directorate of Technical Support and Emergency Management, Occupational Safety and Health Administration, U.S. Department of Labor, 200 Constitution Avenue NW., Room N–3655, Washington, DC 20210; phone: (202) 693–2110 or email: *robinson.kevin@dol.gov.*

SUPPLEMENTARY INFORMATION:

I. Notice of the Applications for Expansion

The Occupational Safety and Health Administration is providing notice that Nemko-CCL, Inc. (CCL), is applying for expansion of its current recognition as an NRTL. CCL requests the addition of two (2) recognized testing and certification sites, and twenty-two (22) additional test standards to its NRTL scope of recognition. Additionally, CCL is applying to relocate its headquarters to Ottawa, Canada, after its existing headquarters in Salt Lake City, Utah was destroyed in a fire.

OSHA recognition of an NRTL signifies that the organization meets the requirements specified in title 29, Code of Federal Regulations, section 1910.7 (29 CFR 1910.7). Recognition is an acknowledgment that the organization can perform independent safety testing and certification of the specific products covered within its scope of recognition and is not a delegation or grant of government authority. Recognition enables employers to use products approved by the NRTL to meet OSHA standards that require product testing and certification.

The Agency processes applications by an NRTL for initial recognition and for an expansion or renewal of this recognition, following requirements in Appendix A to 29 CFR 1910.7. This appendix requires that the Agency publish two notices in the **Federal Register** in processing an application. In the first notice, OSHA announces the application and provides its preliminary finding. In the second notice, the Agency provides its final decision on the application. These notices set forth the NRTL's scope of recognition or modifications of that scope. OSHA maintains an informational Web page for each NRTL, including CCL, which details the NRTL's scope of recognition. These pages are available from the OSHA Web site at *http://www.osha.gov/dts/otpca/nrtl/index.html.*

Each NRTL's scope of recognition includes: (1) The type of products the NRTL may test, with each type specified by its applicable test standard; and (2) the recognized site(s) that has/have the technical capability to perform the product testing and product-certification activities for test standards within the NRTL's scope.

CCL currently has one facility (site) recognized by OSHA for product testing and certification, with its headquarters located at: Nemko-CCL 1940 West Alexander Street, Salt Lake City, Utah 84119–2039. A complete list of CCL sites recognized by OSHA is available at *https://www.osha.gov/dts/otpca/nrtl/ccl.html.*

II. General Background on the Applications for Expansion

CCL submitted two applications, one dated January 28, 2015 (OSHA–2013–0016–008), and a second dated January 26, 2016 (OSHA–2013–0016–009), to expand its recognition to include the addition of two recognized testing and certification sites located at: Nemko North America, Inc., 2210 Faraday Avenue, Suite 150, Carlsbad, California 92008; and Nemko Canada, Inc., 303 River Road, Ottawa, Ontario, Canada K1V 1H2. OSHA staff performed an on-site review of CCL's testing facilities on November 17–18, 2015, at CCL Ottawa, and on January 11–12, 2016, at CCL California. During these assessments, the assessors found some nonconformances with the requirements of 29 CFR 1910.7. CCL addressed these issues sufficiently, and OSHA staff preliminarily determined that OSHA should grant the applications.

CCL's first application also requested the addition of twenty-two test standards to its scope of recognition. OSHA staff performed a detailed analysis of the application packet, reviewed other pertinent information, and conducted the on-site reviews described above in relation to this application.

Table 1 below lists the appropriate test standards found in CCL's application for expansion for testing and certification of products under the NRTL Program.

TABLE 1—PROPOSED LIST OF APPROPRIATE TEST STANDARDS FOR INCLUSION IN CCL'S NRTL SCOPE OF RECOGNITION

Test standard	Test standard title
UL 60335–1	Safety of Household and Similar Electrical Appliances, Part 1: General Requirements.
UL 60335–2–24	Safety Requirement for Household and Similar Electrical Appliances, Part 2: Refrigerating Appliances, Ice-Cream Appliances and Ice Makers.
UL 197	Commercial Electric Cooking Appliances.
UL 250	Household Refrigerators and Freezers.
UL 427	Refrigerating Units.
UL 471	Commercial Refrigerators and Freezers.
UL 499	Electric Heating Appliances.
UL 507	Electric Fans.
UL 561	Floor Finishing Machines.
UL 563	Ice Makers.
UL 705	Power Ventilators.
UL 751	Vending Machines.
UL 763	Motor-Operated Commercial Food Preparing Machines.
UL 859	Personal Grooming Appliance.
UL 867	Electrostatic Air Cleaners.
UL 982	Motor-Operated Food Preparing Machines.
UL 1017	Electric Vacuum Cleaning Machines and Blower Cleaners.
UL 1026	Electric Household Cooking and Food-Serving Appliances.
UL 1082	Household Electric Coffee Makers and Brewing-Type Appliances.
UL 1083	Household Electric Skillets and Frying-Type Appliances.
UL 1431	Personal Hygiene and Health Care Appliances.
UL 1563	Electric Spas, Equipment Assemblies and Associated Equipment.

III. Background on the Relocation of Nemko-CCL, Inc. Headquarters

On October 28, 2015, CCL provided notice to OSHA that their company headquarters located at 1940 West Alexander Road, Salt Lake City, Utah 84119–2039 had been completely destroyed in a fire that occurred on October 25, 2015. CCL temporarily moved their testing operations to their Ottawa and California locations while searching for a location to re-establish their headquarters. OSHA advised CCL that their inability to perform testing at their recognized site could lead to revocation from the NRTL Program, but proceeded to conduct the November 2015 and January 2016 on-site assessments of the Ottawa and California proposed sites because these assessments were scheduled before the fire occurred. In January of 2016, CCL advised OSHA that they wanted to move their headquarters to the Ottawa, Canada site and had secured a new location for their Salt Lake City, Utah site, which would now serve as an administrative site with no test capabilities. OSHA performed an electronic assessment of this new administrative site located at Nemko-CCL, Inc. 2964 West 4700 South, Suite 200, Salt Lake City, Utah 84129, on February 17, 2016.

IV. Preliminary Finding on the Applications

CCL submitted acceptable applications for expansion of its scope of recognition, and relocation of its company headquarters. OSHA's review of the application files and its detailed on-site and electronic assessments indicate that CCL can meet the requirements prescribed by 29 CFR 1910.7 for expanding its recognition to include the addition of these two sites and twenty-two test standards for NRTL testing and certification and the new headquarters site. This preliminary finding does not constitute an interim or temporary approval of CCL's applications.

OSHA welcomes public comment as to whether CCL meets the requirements of 29 CFR 1910.7 for expansion of its recognition as an NRTL. Comments should consist of pertinent written documents and exhibits. Commenters needing more time to comment must submit a request in writing, stating the reasons for the request. Commenters must submit the written request for an extension by the due date for comments. OSHA will limit any extension to 10 days unless the requester justifies a longer period. OSHA may deny a request for an extension if it is not adequately justified. To obtain or review copies of the exhibits identified in this notice, as well as comments submitted to the docket, contact the Docket Office, Room N–2625, Occupational Safety and Health Administration, U.S. Department of Labor, at the above address. These materials also are available online at *http://www.regulations.gov* under Docket No. OSHA–2013–0016.

OSHA staff will review all comments to the docket submitted in a timely manner and, after addressing the issues raised by these comments, will recommend to the Assistant Secretary for Occupational Safety and Health whether to grant CCL's applications for expansion of its scope of recognition. The Assistant Secretary will make the final decision on granting the applications. In making this decision, the Assistant Secretary may undertake other proceedings prescribed in Appendix A to 29 CFR 1910.7.

OSHA will publish a public notice of this final decision in the **Federal Register.**

Authority and Signature

David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health, 200 Constitution Avenue NW., Washington, DC 20210, authorized the preparation of this notice. Accordingly, the Agency is issuing this notice pursuant to 29 U.S.C. 657(g)(2), Secretary of Labor's Order No. 1–2012 (77 FR 3912, Jan. 25, 2012), and 29 CFR 1910.7.

Signed at Washington, DC, on May 12, 2016.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2016–11595 Filed 5–16–16; 8:45 am]

BILLING CODE 4510–26–P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

Susan Harwood Training Grant Program, FY 2016

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Notice of availability of funds and funding opportunity announcements (FOA) for Targeted Topic Training and Capacity Building grants.

Funding Opportunity Number: SHTG–FY–16–01 (Targeted Topic grants)

Funding Opportunity Number: SHTG–FY–16–02 (Capacity Building grants)

Catalog of Federal Domestic Assistance Number: 17.502.

SUMMARY: This notice announces availability of approximately $4.5 million for Susan Harwood Training Program grants. Two separate funding opportunity announcements are available for Targeted Topic Training grants and Capacity Building grants. Two types of grants are being announced under each funding opportunity. Funding Opportunity Number SHTG–FY–16–01 will cover the two types of Targeted Topic Training grants: (1) Targeted Topic Training and (2) Targeted Topic Training and Educational Materials Development grants. Funding Opportunity Number SHTG–FY–16–02 will cover the two types of Capacity Building grants: (1) Capacity Building Developmental and (2) Capacity Building Pilot grants.

DATES: Grant applications for both Targeted Topic Training and Capacity Building grants must be received electronically by the *Grants.gov* system no later than 11:59 p.m., ET, on Tuesday, June 28, 2016.

ADDRESSES: The complete Susan Harwood Training Grant Program funding opportunity announcements and all information needed to apply for these funding opportunities are available at the *Grants.gov* Web site, *http://www.Grants.gov.*

FOR FURTHER INFORMATION CONTACT: Questions regarding the funding opportunity announcements should be emailed to *HarwoodGrants@dol.gov* or directed to Donna Robertson, Program Analyst, or Bob Murphy, Director, Office of Training Programs and Administration, at 847–759–7700 (note this is not a toll-free number). Personnel will not be available to answer questions after 5:00 p.m., ET. To obtain further information on the Susan Harwood Training Grant Program, visit the OSHA Web site at: *http://www.osha.gov/dte/sharwood/index.html.*

Questions regarding *Grants.gov* should be emailed to *Support@Grants.gov* or directed to the *Grants.gov* Contact Center, at 1–800–518–4726 (toll free number). The Contact Center is available 24 hours a day, 7 days a week. The Contact Center is closed on Federal holidays.

Authority and Signature

David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health, directed the preparation of this notice. The authority for this notice is Section 21 of the Occupational Safety and Health Act of 1970, (29 U.S.C. 670), Public Law 113–235, and Secretary of Labor's Order No. 1–2012 (77 FR 3912).

Signed at Washington, DC, on May 3, 2016.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2016–11591 Filed 5–16–16; 8:45 am]

BILLING CODE 4510–26–P

LIBRARY OF CONGRESS

Copyright Royalty Board

[Docket No. 16–CRB–0013–DART–MWF (2012–2013)]

Distribution of the 2012–2013 Digital Audio Recording Technology Musical Works Royalty Funds

AGENCY: Copyright Royalty Board, Library of Congress.

ACTION: Notice soliciting comments on motion for partial distribution.

SUMMARY: The Copyright Royalty Judges solicit comments on a motion for partial distribution in connection with 2012 and 2013 DART Musical Works Fund royalties.

DATES: Comments are due on or before June 16, 2016.

ADDRESSES: This notice and request for comments is also posted on the agency's Web site (*www.loc.gov/crb*). Submit electronic comments to *crb@loc.gov.* See the Supplementary Information section below for instructions on submitting comments in other formats.

FOR FURTHER INFORMATION CONTACT: Kimberly Whittle, attorney-advisor, by telephone at (202) 707–7658 or email at *crb@loc.gov.*

SUPPLEMENTARY INFORMATION: On April 3, 2016, Broadcast Music, Inc. (BMI), the American Society of Composers, Authors and Publishers (ASCAP), SESAC, Inc. (SESAC) (together the Performing Rights Organizations or PROs) and The Harry Fox Agency LLC (with the PROs, the Settling Claimants) filed with the Copyright Royalty Judges (Judges) a *Motion for Partial Distribution of the Musical Works Fund . . .* (Motion). In the Motion, the Settling Claimants asserted that they have reached a confidential settlement among themselves concerning the distribution shares of the 2012 and 2013 DART Musical Works Fund royalties.

The Settling Claimants contend that they are, or they represent, "the vast majority" of claimants entitled to the Musical Works Fund royalties at issue in this proceeding. As support for their request, the Settling Claimants assert that, since 1997, non-settling music writer or publisher claimants have established claims to and have received less than 0.1% of the Musical Works Fund, if any. The Settling Claimants request a partial distribution of 95% of the subject royalty funds pursuant to Section 801(b)(3)(C) of the Copyright Act (Act).

Under section 801(b)(3)(C) of the Act, before ruling on a partial distribution motion the Judges must publish a notice in the **Federal Register** to ascertain whether any claimant entitled to receive a share of the subject royalty fees has a reasonable objection to the proposed distribution. Consequently, this Notice seeks comments from interested claimants on whether any reasonable objection exists that would preclude distribution of 95% of the 2012 and 2013 DART Musical Works Fund royalties to the Settling Claimants. Any party wishing to advise the judges of the existence and extent of an objection must do so, in writing, by the end of the comment period. The judges will not consider any objections with respect to the partial distribution motion that come to their attention after the close of that period.

How To Submit Comments

Interested claimants must submit comments to only *one* of the following addresses. Unless responding by email, claimants must submit an original, five paper copies, and an electronic version on a CD.

Email: crb@loc.gov; or

U.S. mail: Copyright Royalty Board, P.O. Box 70977, Washington, DC 20024–0977; or

Overnight service (only USPS Express Mail is acceptable): Copyright Royalty Board, P.O. Box 70977, Washington, DC 20024–0977; or

Commercial courier: Address package to: Copyright Royalty Board, Library of Congress, James Madison Memorial Building, LM–403, 101 Independence Avenue SE., Washington, DC 20559–6000. Deliver to: Congressional Courier Acceptance Site, 2nd Street NE., and D Street NE., Washington, DC; or

Hand delivery: Library of Congress, James Madison Memorial Building, LM–401, 101 Independence Avenue SE., Washington, DC 20559–6000.

Dated: May 11, 2016.

Suzanne M. Barnett,

Chief U.S. Copyright Royalty Judge.

[FR Doc. 2016–11561 Filed 5–16–16; 8:45 am]

BILLING CODE 1410–72–P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

[NARA–2016–031]

Records Schedules; Availability and Request for Comments

AGENCY: National Archives and Records Administration (NARA).

ACTION: Notice of availability of proposed records schedules; request for comments.

SUMMARY: The National Archives and Records Administration (NARA) publishes notice at least once monthly of certain Federal agency requests for records disposition authority (records schedules). Once approved by NARA, records schedules provide agencies with mandatory instructions for what to do with records when agencies no longer need them for current Government business. The instructions authorize agencies to preserve records of continuing value in the National Archives of the United States and to destroy, after a specified period, records lacking administrative, legal, research, or other value. NARA publishes notice in the **Federal Register** for records schedules in which agencies propose to destroy records not previously authorized for disposal or to reduce the retention period of records already authorized for disposal. NARA invites public comments on such records schedules, as required by 44 U.S.C. 3303a(a).

DATES: NARA must receive requests for copies in writing by June 16, 2016. Once NARA appraises the records, we will send you a copy of the schedule you requested. We usually prepare appraisal memoranda that contain additional information concerning the records covered by a proposed schedule. You may also request these. If you do, we will also provide them once we have completed the appraisal. You have 30 days after we send you these requested documents in which to submit comments.

ADDRESSES: You may request a copy of any records schedule identified in this notice by contacting Records Appraisal and Agency Assistance (ACRA) using one of the following means:

Mail: NARA (ACRA); 8601 Adelphi Road; College Park, MD 20740–6001.

Email: request.schedule@nara.gov.

FAX: 301–837–3698.

You must cite the control number, which appears in parentheses after the name of the agency that submitted the schedule, and a mailing address. If you would like an appraisal report, please include that in your request.

FOR FURTHER INFORMATION CONTACT: Margaret Hawkins, Director, by mail at Records Appraisal and Agency Assistance (ACRA); National Archives and Records Administration; 8601 Adelphi Road, College Park, MD 20740–6001, by phone at 301–837–1799, or by email at *request.schedule@nara.gov.*

SUPPLEMENTARY INFORMATION: Each year, Federal agencies create billions of records on paper, film, magnetic tape, and other media. To control this accumulation, agency records managers prepare schedules proposing retention periods for records and submit these schedules for NARA's approval. These schedules provide for timely transfer into the National Archives of historically valuable records and authorize disposal of all other records after the agency no longer needs them to conduct its business. Some schedules are comprehensive and cover all the records of an agency or one of its major subdivisions. Most schedules, however, cover records of only one office or program or a few series of records. Many of these update previously approved schedules, and some include records proposed as permanent.

The schedules listed in this notice are media-neutral unless otherwise specified. An item in a schedule is media-neutral when an agency may apply the disposition instructions to records regardless of the medium in which it has created or maintains the records. Items included in schedules submitted to NARA on or after December 17, 2007, are media-neutral unless the item is specifically limited to a specific medium. (See 36 CFR 1225.12(e).)

Agencies may not destroy Federal records without the approval of the Archivist of the United States. The Archivist grants this approval only after thorough consideration of the records' administrative use by the agency of origin, the rights of the Government and of private people directly affected by the Government's activities, and whether or not the records have historical or other value.

In addition to identifying the Federal agencies and any subdivisions requesting disposition authority, lists the organizational unit(s) accumulating the records or lists that the schedule has agency-wide applicability (in the case of schedules that cover records that may be accumulated throughout an agency); provides the control number assigned to each schedule, the total number of schedule items, and the number of temporary items (the records proposed for destruction); and includes a brief description of the temporary records. The records schedule itself contains a full description of the records at the file unit level as well as their disposition. If NARA staff has prepared an appraisal memorandum for the schedule, it also includes information about the records. You may request additional information about the disposition process at the addresses above.

Schedules Pending

1. Department of Agriculture, Farm Service Agency (DAA–0161–2016–0001, 4 items, 4 temporary items). Records

related to loans administered by the Commodity Credit Corporation.

2. Department of Agriculture, Food and Nutrition Service (DAA–0462–2016–0001, 1 item, 1 temporary item). Master files of an electronic information system used to collect and track data relating to the Supplemental Nutritional Assistance Program.

3. Department of the Army, Agency-wide (DAA–AU–2016–0007, 1 item, 1 temporary item). Records relating to requests for waivers for applicants who do not meet established standards for enlistment in the Army.

4. Department of the Army, Agency wide (DAA–AU–2016–0018, 1 item, 1 temporary item). Records of economic data gathered during water management projects.

5. Department of Defense, Defense Finance and Accounting Service (DAA–0507–2016–0001, 1 item, 1 temporary item). Revision of item for foreign military sales case files to add collection and disbursement vouchers.

6. Department of Defense, Defense Threat Reduction Agency (DAA–0374–2014–0016, 1 item, 1 temporary item). Records relating to policies and procedures for verifying location of weapons systems.

7. Department of Defense, Defense Threat Reduction Agency (DAA–0374–2014–0030, 1 item, 1 temporary item). Records relating to the development of strategic plans including balanced scorecard and program review documentation.

8. Department of Homeland Security, Immigration and Customs Enforcement (DAA–0567–2015–0014, 6 items, 6 temporary items). Records related to removal travel operations including copies of international deportation agreements, guidance briefings, detainee custody review case files, and transportation logistics materials.

9. Department of Homeland Security, United States Citizenship and Immigration Services (DAA–0566–2016–0012, 3 items, 3 temporary items). Undeliverable and returned outgoing mail, to include submitted documentation and notices.

10. Department of Justice, Bureau of Alcohol, Tobacco, Firearms, and Explosives (DAA–0436–2016–0001, 2 items, 2 temporary items). Master files of an electronic information system used to collect and manage information gathered in the investigation of reported incidents of internal misconduct.

11. Department of Labor, Office of Congressional and Intergovernmental Affairs (DAA–0174–2013–0003, 9 items, 8 temporary items). Records related to congressional and intergovernmental affairs including correspondence and casework files, notification and announcement files, work files, appointment files, subject files, general correspondence, and related materials. Proposed for permanent retention are memorandum files.

12. Department of the Treasury, Internal Revenue Service (DAA–0058–2016–0007, 1 item, 1 temporary item). Master files of an electronic information system used for fraud detection.

13. Department of the Treasury, Internal Revenue Service (DAA–0058–2016–0009, 1 item, 1 temporary item). Master files of an electronic information system used for transaction processing and data validation.

14. Department of the Treasury, Internal Revenue Service (DAA–0058–2016–0010, 1 item, 1 temporary item). Master files of an electronic information system used to detect fraudulent tax return filings.

15. Department of the Treasury, Internal Revenue Service (DAA–0058–2016–0011, 1 item, 1 temporary item). Records of a Web site used to support a taxpayer rights conference.

16. Court Services and Offenders Supervision Agency for the District of Columbia, Agency-wide (DAA–0562–2014–0002, 4 items, 1 temporary item). Internal administrative directives. Proposed for permanent retention are records of high-level officials, mission-related policies and procedures, and annual reports and strategic plans.

17. Court Services and Offenders Supervision Agency for the District of Columbia, Agency-wide (DAA–0562–2016–0001, 2 items, 2 temporary items). Records documenting court-ordered expunction.

18. Environmental Protection Agency, Office of Water (DAA–0412–2016–0001, 1 item, 1 temporary item). Electronic data obtained from injection well activity reports and managed by the Underground Injection Control Program Summary System.

Dated: May 6, 2016.

Margaret Hawkins,

Director, Records Appraisal and Agency Assistance.

[FR Doc. 2016–11610 Filed 5–16–16; 8:45 am]

BILLING CODE 7515–01–P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

[NARA–2016–032]

Advisory Committee on the Records of Congress

AGENCY: National Archives and Records Administration (NARA).

ACTION: Notice of Advisory Committee meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, NARA announces a meeting of the Advisory Committee on the Records of Congress. The meeting is open to the public.

DATES: The meeting will be on June 13, 2016, from 10:00 a.m. to 11:30 a.m. EDT.

ADDRESSES: Capitol Visitor Center, Room SVC209–08 (Senate Visitor Center).

FOR FURTHER INFORMATION CONTACT: Center for Legislative Archives at (202) 357–5350 or Sharon Fitzpatrick by email at: *sharon.fitzpatrick@nara.gov.*

SUPPLEMENTARY INFORMATION:

Background

The committee advises NARA on the full range of programs, policies, and plans for the Center for Legislative Archives in the Office of Legislative Archives, Presidential Libraries, and Museum Services (LPM).

Agenda

(1) Chair's Opening Remarks—Secretary of the U.S. Senate
(2) Recognition of Co-chair—Clerk of the U.S. House of Representatives
(3) Recognition of the Archivist of the United States
(4) Approval of the minutes of the last meeting
(5) Senate Archivist's report
(6) House Archivist's report
(7) Center Update
(8) Other current issues and new business

Patrice Little Murray,

Committee Management Officer.

[FR Doc. 2016–11565 Filed 5–16–16; 8:45 am]

BILLING CODE 7515–01–P

NATIONAL SCIENCE FOUNDATION

Advisory Committee for Mathematical and Physical Sciences; Notice of Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting:

Name: Advisory Committee for Mathematical and Physical Sciences (#66) (VIRTUAL).

Date/Time: May 23, 2016: 1:00 p.m. to 2:00 p.m. EDT.

Place: National Science Foundation 4201 Wilson Blvd., Arlington, VA 22230. (Virtual).

Type of Meeting: CLOSED.

Contact Person: Eduardo Misawa, National Science Foundation, 4201

Wilson Boulevard, Suite 505, Arlington, Virginia 22230; Telephone: 703/292–8300.

Purpose of Meeting: To provide advice, recommendations and counsel on major goals and policies pertaining to mathematical and physical sciences programs and activities.

Agenda

Monday, May 23, 2016 1:00 p.m.–2:00 p.m. EDT

1:00–1:05 Meeting opening, FACA briefing
1:05–2:00 Discussion on follow-up on Particle Physics Project Prioritization Panel (P5) report
2:00 Adjourn

Reason for Closing: The early public discussion of federal government's proposed response to the P5 report may significantly frustrate implementation of the proposed action. These matters are exempt under 5 U.S.C. 552b(c), (9) of the Government in the Sunshine Act.

Dated: May 11, 2016.

Crystal Robinson,

Committee Management Officer.

[FR Doc. 2016–11566 Filed 5–16–16; 8:45 am]

BILLING CODE 7555–01–P

NATIONAL SCIENCE FOUNDATION

Proposal Review Panel for Physics; Notice of Meeting

In accordance with the Federal Advisory Committee Act (Pub. L. 92–463, as amended), the National Science Foundation announces the following meeting:

Name: Proposal Review Panel for the Division of Physics (1208) (V162137) Site Visit.

Date and Time: June 21–22, 2016; 8:30 a.m.–5:00 p.m.

June 23, 2016; 8:30 a.m.–12:00 p.m.

Place: LIGO Observatory in Hanford, WA.

Type of Meeting: Part—Open.

Contact Person: Mark Coles, Facilities Manager, Division of Physics, National Science Foundation, 4201 Wilson Blvd., Room 1015, Arlington, VA 22230; Telephone: (703) 292–4432.

Purpose of Meeting: Site visit to provide an evaluation of the progress of the projects at the host site for the Division of Physics at the National Science Foundation.

Agenda

June 21, 2016

8:30 a.m.–9:00 a.m. Executive Session (CLOSED)
9:00 a.m.–Noon Plenary presentations on LIGO operation
1:00 p.m.–3:00 p.m. Facility Tour
3:00 p.m.–4:30 p.m. Breakout sessions
4:30 p.m. Executive session (CLOSED)
5:00 p.m. Brief joint session with panel and LIGO

June 22, 2016

8:30 a.m.–9:00 a.m. Executive session (CLOSED)
9:00 a.m.–Noon Breakout sessions
Noon–1:00 p.m. Lunch
1:00 p.m.–4:00 p.m. Breakout sessions
4:00 p.m. Executive session (CLOSED)
5:00 p.m. Homework assignment meeting (joint LIGO + panel)

June 23, 2016

8:30 a.m. Homework reports to panel (CLOSED)
9:00 a.m. Panel report writing in executive session (CLOSED)
Noon Panel summary report (CLOSED)

Reason for Closing: Topics to be discussed and evaluated during the site review will include information of a proprietary or confidential nature, including technical information and information on personnel. These matters are exempt under 5 U.S.C. 552b(c), (4) and (6) of the Government in the Sunshine Act.

Dated: May 11, 2016.

Crystal Robinson,

Committee Management Officer.

[FR Doc. 2016–11567 Filed 5–16–16; 8:45 am]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 52–025–LA–2 and 52–026–LA–2; ASLBP No. 16–946–02–LA–BD01]

Southern Nuclear Operating Company, Inc.; Establishment of Atomic Safety and Licensing Board

Pursuant to delegation by the Commission, *see* 37 FR 28,710 (Dec. 29, 1972), and the Commission's regulations, *see, e.g.,* 10 CFR 2.104, 2.105, 2.300, 2.309, 2.313, 2.318, 2.321, notice is hereby given that an Atomic Safety and Licensing Board (Board) is being established to preside over the following proceeding:

Southern Nuclear Operating Company, Inc. (Vogtle Electric Generating Plant, Units 3 and 4)

This proceeding involves a challenge to an application by Southern Nuclear Operating Company, Inc. for an amendment to the operating licenses for the Vogtle Electric Generating Plant, Units 3 and 4, located in Burke County, Georgia. In response to a notice of the license amendment application filed in the **Federal Register,** *see* 81 FR 10,920 (Mar. 2, 2016), the Blue Ridge Environmental Defense League and its chapter Concerned Citizens of Shell Bluff filed a Petition to Intervene and Request for Hearing on May 2, 2016.

The Board is comprised of the following Administrative Judges:

Ronald M. Spritzer, Chairman, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001
Nicholas G. Trikouros, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001
Dr. Gary S. Arnold, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001

All correspondence, documents, and other materials shall be filed in accordance with the NRC E-Filing rule. *See* 10 CFR 2.302.

Rockville, Maryland.

Dated: May 11, 2016.

E. Roy Hawkens,

Chief Administrative Judge, Atomic Safety and Licensing Board Panel.

[FR Doc. 2016–11597 Filed 5–16–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2016–0098]

Disposition of Information Related to the Time Period That Safety-Related Structures, Systems, or Components Are Installed

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft regulatory issue summary; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is seeking public comment on a draft regulatory issue summary (RIS) to inform nuclear power reactor licensees of existing requirements related to dispositioning information pertaining to the capability of safety-related structures, systems, and components (SSCs) to perform their safety-related functions in nuclear power plants. The draft RIS addresses instances where a licensee becomes aware of credible information pertaining to the time period that a safety-related structure, system, or component is installed that may negatively impact its ability to perform its safety-related function or functions. Licensees must address this information consistent with their licensing basis and applicable NRC requirements.

DATES: Submit comments by July 18, 2016. Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject):

- *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2016–0098. Address questions about NRC dockets to Carol Gallagher; telephone: 301–415–3463; email: *Carol.Gallagher@nrc.gov.* For technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.
- *Mail comments to:* Cindy Bladey, Office of Administration, Mail Stop: OWFN–12–H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

For additional direction on obtaining information and submitting comments, see "Obtaining Information and Submitting Comments" in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: John Thompson, telephone: 301–415–1011, email: *John.Thompson@nrc.gov;* and Eric Thomas, telephone: 301–415–6772, email: *Eric.Thomas@nrc.gov.* Both are staff members of the Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2016–0098 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2016–0098.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select "*ADAMS Public Documents*" and then select "*Begin Web-based ADAMS Search.*" For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* The draft RIS, "Disposition of Information Related to the Time Period that Safety-Related Structures, Systems, or Components are Installed," is available in ADAMS under Accession No. ML16111B121.
- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC–2016–0098 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC posts all comment submissions at *http://www.regulations.gov* as well as entering the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Background

The NRC staff has developed draft RIS 2016–xx, "Disposition of Information Related to the Time Period that Safety-Related Structures, Systems, or Components are Installed," to clarify NRC requirements and programs that provide quality assurance and ensure the operability of safety-related SSCs. When a licensee either becomes aware that a safety-related SSC has been installed for longer that the amount of time described in the licensing basis, or becomes aware of credible information that challenges the presumption that a safety-related SSC can continue to perform its safety function(s), the licensee must assess the information consistent with their licensing basis and applicable NRC requirements. These instances must be addressed in accordance with a licensee's NRC-approved quality assurance program, operability/functionality determination process, and corrective action program.

The NRC issues RISs to communicate with stakeholders on a broad range of matters. This may include clarification of existing requirements and regulations.

Proposed Action

The NRC is requesting public comment on the draft RIS. The NRC plans to hold a public meeting to discuss this draft RIS. All comments that are to receive consideration in the final RIS must still be submitted electronically or in writing as indicated in the **ADDRESSES** section of this document. Additional details regarding the meeting will be posted at least 10 days prior to the public meeting on the NRC's Public Meeting Schedule Web site at *http://www.nrc.gov/public-involve/public-meetings/index.cfm.* The NRC staff will make a final determination regarding issuance of the RIS after it considers any public comments received in response to this request.

Dated at Rockville, Maryland, this 3rd day of May 2016.

For the Nuclear Regulatory Commission.

Eric M. Thomas,

Operating Experience Branch, Division of Inspection and Regional Support, Office of Nuclear Reactor Regulation.

[FR Doc. 2016–11598 Filed 5–16–16; 8:45 am]

BILLING CODE 7590–01–P

SECURITIES AND EXCHANGE COMMISSION

Sunshine Act Meeting

Notice is hereby given, pursuant to the provisions of the Government in the Sunshine Act, Public Law 94–409, that the Securities and Exchange Commission will hold a closed meeting on Thursday, May 19, 2016 at 2 p.m.

Commissioners, Counsel to the Commissioners, the Secretary to the Commission, and recording secretaries will attend the closed meeting. Certain staff members who have an interest in the matters also may be present.

The General Counsel of the Commission, or her designee, has certified that, in her opinion, one or more of the exemptions set forth in 5 U.S.C. 552b(c)(3), (5), (7), 9(B) and (10) and 17 CFR 200.402(a)(3), (a)(5), (a)(7), (a)(9)(ii) and (10), permit consideration of the scheduled matter at the closed meeting.

Commissioner Piwowar, as duty officer, voted to consider the items listed for the closed meeting in closed session.

The subject matter of the closed meeting will be:

Institution and settlement of injunctive actions;

Institution and settlement of administrative proceedings;
Resolution of litigation claims;
Formal orders of investigation; and
Other matters relating to enforcement proceedings.

At times, changes in Commission priorities require alterations in the scheduling of meeting items.

For further information and to ascertain what, if any, matters have been added, deleted or postponed, please contact Brent J. Fields from the Office of the Secretary at (202) 551–5400.

Dated: May 12, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–11704 Filed 5–13–16; 4:15 pm]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77811; File No. SR–Phlx–2016–57]

Self-Regulatory Organizations; NASDAQ PHLX LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Related to Customer Rebates

May 11, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that, on May 2, 2016, NASDAQ PHLX LLC (“Phlx” or “Exchange”) filed with the Securities and Exchange Commission (“Commission”) the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend the Exchange's Pricing Schedule at Section B, entitled “Customer Rebate Program.”

The text of the proposed rule change is available on the Exchange's Web site at *http://nasdaqomxphlx.cchwallstreet.com/,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of the proposed rule change is to amend the Exchange's Pricing Schedule at Section B, entitled “Customer Rebate Program.” Specifically, the Exchange is proposing to exclude options overlying NDX[3] and MNX[4] from receiving a Customer[5] rebate.

Currently, the Exchange has a Customer Rebate Program consisting of five tiers that pay Customer rebates on three Categories, A,[6] B[7] and C[8] of transactions.[9] A Phlx member qualifies for a certain rebate tier based on the percentage of total national customer volume in multiply-listed options that it transacts monthly on Phlx. The Exchange calculates Customer volume in Multiply Listed Options by totaling electronically-delivered and executed volume, excluding volume associated with electronic Qualified Contingent Cross (“QCC”) Orders,[10] as defined in Exchange Rule 1080(o).[11] The Exchange pays the following rebates:[12]

Customer rebate tiers	Percentage thresholds of national customer volume in multiply-listed equity and ETF options classes, excluding spy options (monthly)	Category A	Category B	Category C
Tier 1	0.00%–0.60%	$0.00	$0.00	$0.00
Tier 2	Above 0.60%–1.10%	0.10	0.10	0.17
Tier 3	Above 1.10%–1.60%	0.15	0.12	0.17
Tier 4	Above 1.60%–2.50%	0.20	0.16	0.22
Tier 5	Above 2.50%	0.21	0.17	0.22

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[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] NDX represents options on the Nasdaq 100 Index traded under the symbol NDX (“NDX”).

[4] MNX represents options on the one-tenth value of the Nasdaq 100 Index traded under the symbol MNX (“MNX”).

[5] The term “Customer” applies to any transaction that is identified by a member or member organization for clearing in the Customer range at The Options Clearing Corporation which is not for the account of a broker or dealer or for the account of a “Professional” (as that term is defined in Rule 1000(b)(14)).

[6] Category A rebates are paid to members executing electronically-delivered Customer Simple Orders in Penny Pilot Options and Customer Simple Orders in Non-Penny Pilot Options in Section II symbols.

[7] Category B rebates are paid on Customer PIXL Orders in Section II symbols that execute against non-Initiating Order interest. In the instance where member organizations qualify for Tier 4 or higher in the Customer Rebate Program, Customer PIXL Orders that execute against a PIXL Initiating Order are paid a rebate of $0.14 per contract. Rebates on Customer PIXL Orders are capped at 4,000 contracts per order for Simple PIXL Orders.

[8] Category C rebates are paid to members executing electronically-delivered Customer Complex Orders in Penny Pilot Options and Non-Penny Pilot Options in Section II symbols. Rebates are paid on Customer PIXL Complex Orders in Section II symbols that execute against non-Initiating Order interest. Customer Complex PIXL Orders that execute against a Complex PIXL Initiating Order are not paid a rebate under any circumstances. The Category C Rebate is paid [sic] when an electronically-delivered Customer Complex Order, including Customer Complex PIXL Order, executes against another electronically-delivered Customer Complex Order. Rebates on Customer PIXL Orders are capped at 4,000 contracts per order leg for Complex PIXL Orders.

[9] *See* Section B of the Pricing Schedule.

[10] A QCC Order is comprised of an originating order to buy or sell at least 1,000 contracts, or 10,000 contracts in the case of Mini Options, that is identified as being part of a qualified contingent trade, as that term is defined in Rule 1080(o)(3), coupled with a contra-side order or orders totaling an equal number of contracts. *See* Rule 1080(o).

[11] Members and member organizations under common ownership may aggregate their Customer volume for purposes of calculating the Customer Rebate Tiers and receiving rebates. Common ownership means members or member organizations under 75% common ownership or control. *See* the Preface of the Pricing Schedule.

[12] SPY is included in the calculation of Customer volume in Multiply Listed Options that are electronically-delivered and executed for purposes of the Customer Rebate Program, however, the rebates do not apply to electronic executions in SPY. Additionally, the Exchange pays a $0.02 per contract Category A and B rebate and a $0.03 per contract Category C rebate in addition to the applicable Tier 2 and 3 rebate to a Specialist or Market Maker or its member or member organization affiliate under Common Ownership provided the Specialist or Market Maker has reached the Monthly Market Maker Cap, as defined in Section II. *See* Section B of the Pricing Schedule.

Today, options overlying NDX and MNX are included in the total volume to qualify a market participant for a Customer Rebate. The Exchange is proposing to continue to permit the electronically-delivered and executed volume associated with options overlying NDX and MNX to be included in the calculation of total market volume. The Exchange proposes to exclude options overlying NDX and MNX as eligible to receive a Customer Rebate in any Category.

In calculating electronically-delivered and executed Customer volume in Multiply Listed Options, the numerator of the equation will remain unchanged and will continue to include all electronically-delivered and executed Customer volume in Multiply Listed Options, including NDX and MNX. The denominator of that equation will also remain unchanged and will continue to include national customer volume in multiply-listed equity and ETF options volume. By including options overlying NDX and MNX in the computation for Customer Rebates, members will continue to receive the benefit of those transactions toward calculating their eligible rebate tiers and earning a rebate on all qualifying transactions.

At this time, the Exchange proposes to not pay Customer Rebates on options overlying NDX and MNX because of the exclusivity of these options. NDX and MNX are Phlx proprietary index options which currently trade on Phlx and one other options exchange. Therefore, the Exchange would not pay rebates on options overlying NDX and MNX as part of the Customer Rebate Program. The Exchange believes members will continue to be afforded an opportunity to achieve new Customer Rebate Program tiers or maintain their current level of Customer Rebate Program tiers.

2. Statutory Basis

The proposal is consistent with Section 6(b) of the Act,[13] in general, and furthers the objectives of Sections 6(b)(4) and 6(b)(5) of the Act,[14] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among members and issuers and other persons using any facility or system which the Exchange operates or controls, and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

The Commission and the courts have repeatedly expressed their preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. In Regulation NMS, while adopting a series of steps to improve the current market model, the Commission highlighted the importance of market forces in determining prices and SRO revenues and, also, recognized that current regulation of the market system "has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies." [15]

Likewise, in *NetCoalition* v. *Securities and Exchange Commission* [16] the D.C. Circuit upheld the Commission's use of a market-based approach in evaluating the fairness of market data fees against a challenge claiming that Congress mandated a cost-based approach.[17] As the court emphasized, the Commission "intended in Regulation NMS that 'market forces, rather than regulatory requirements' play a role in determining the market data . . . to be made available to investors and at what cost." [18]

Further, "[n]o one disputes that competition for order flow is 'fierce.' . . . As the SEC explained, '[i]n the U.S. national market system, buyers and sellers of securities, and the broker-dealers that act as their order-routing agents, have a wide range of choices of where to route orders for execution'; [and] 'no exchange can afford to take its market share percentages for granted' because 'no exchange possesses a monopoly, regulatory or otherwise, in the execution of order flow from broker dealers' . . . ." [19] Although the court and the SEC were discussing the cash equities markets, the Exchange believes that these views apply with equal force to the options markets.

It is reasonable to no longer pay Customer Rebates on options overlying NDX and MNX in any Category (A, B or C) because these proprietary index options only trade on two options markets at this time. The original intent of the Customer Rebate Program was to pay rebates on electronically-delivered Multiply-Listed Options. By definition, these indices qualify as Multiply-Listed Options because they trade on more than one options exchange. These proprietary index options trade on Phlx and one other options exchange. The Exchange does not desire to pay rebates on options overlying NDX and MNX because of their exclusivity. Despite the fact that technically these options trade on more than one venue, other exchanges cannot list these options. The Exchange believes it is reasonable to continue to count options overlying NDX and MNX in the total volume to qualify a market participant for a Customer Rebate, however, options overlying NDX and MNX will no longer be paid the Customer rebates in any Category because of the exclusivity of this option. Market participants would continue to benefit from NDX and MNX options volume in terms of qualifying for Customer Rebate Tiers. The Exchange believes that not paying Customer Rebates on options overlying NDX and MNX further aligns these products with other Singly Listed Options as compared to Multiply-Listed Options.

It is equitable and not unfairly discriminatory to no longer pay Customer Rebates on options overlying NDX and MNX in any Category because the Exchange would apply its calculation to determine the eligibility and payment of Customer rebates in a uniform manner. The Exchange's proposal to no longer pay Customer Rebates on options overlying NDX and MNX in any Category is equitable and not unfairly discriminatory because the Exchange would no longer pay Customer Rebates on any transaction with options overlying either NDX or MNX to any market participant. Also, any market participant is eligible to earn a Customer Rebate.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. In terms of inter-market competition, the Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues if they deem fee levels at a particular venue to be excessive, or rebate opportunities available at other venues to be more favorable. In such an environment, the Exchange must continually adjust its fees to remain competitive with other exchanges and with alternative trading systems that have been exempted from compliance with the statutory standards applicable to exchanges. Because competitors are free to modify their own fees in response, and because market participants may readily adjust their order routing practices, that the degree to which fee changes in this market may impose any burden on competition is extremely limited.

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[13] 15 U.S.C. 78f(b).

[14] 15 U.S.C. 78f(b)(4) and (5).

[15] *See* Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37497 [sic], 37499 (June 29, 2005) ("Regulation NMS Adopting Release").

[16] *See* Securities Exchange Act Release No. 51808 (June 9, 2005) [sic] at 534–535.

[17] *See* Securities Exchange Act Release No. 51808 (June 9, 2005) [sic] at 534.

[18] *See* Securities Exchange Act Release No. 51808 (June 9, 2005) [sic] at 537.

[19] *See* Securities Exchange Act Release No. 51808 (June 9, 2005) [sic] at 539 (quoting Securities Exchange Act Release No. 59039 (December 2, 2008), 73 FR 74770, 74782–83 (December 9, 2008) (SR–NYSEArca–2006–21) [sic].

The Exchange's proposal to no longer pay Customer Rebates on options overlying NDX and MNX in any Category does not impose an undue burden on intra-market competition because the Exchange would apply the calculation of Customer rebates and would pay rebates on qualifying orders in a uniform manner. No market participant would be paid a Customer Rebate in options overlying NDX or MNX. All market participants may participate in the Customer Rebate Program. Members would continue to benefit from the inclusion of options overlying NDX and MNX in the total volume to qualify a market participant for a Customer Rebate.

Also, the Exchange's proposal to no longer pay Customer Rebates on options overlying NDX and MNX in any Category does not impose an undue burden on inter-market competition because there is only one other exchange that transacts options overlying NDX and MNX through a contractual agreement with the Exchange. That venue may choose to also not pay rebates on options overlying NDX or MNX. Other venues may not list these proprietary indices.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act.[20]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is: (i) Necessary or appropriate in the public interest; (ii) for the protection of investors; or (iii) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–Phlx–2016–57 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–Phlx–2016–57. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–Phlx–2016–57 and should be submitted on or before June 7, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[21]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11541 Filed 5–16–16; 8:45 am]

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[20] 15 U.S.C. 78s(b)(3)(A)(ii).

[21] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77809; File No. SR–ICEEU–2016–006]

Self-Regulatory Organizations; ICE Clear Europe Limited; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Relating to Accounts Categories for Positions of Clearing Member Affiliates

May 11, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on April 28 2016, ICE Clear Europe Limited ("ICE Clear Europe" or "Clearing House") filed with the Securities and Exchange Commission ("Commission") the proposed rule changes described in Items I, II and III below, which Items have been prepared by ICE Clear Europe. ICE Clear Europe filed the proposal pursuant to Section 19(b)(3)(A) of the Act,[3] and Rule 19b–4(f)(i)[4] thereunder, so that the proposal was effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The principal purpose of the proposed changes is to clarify the account categories to be used for positions of affiliates of Clearing Members.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, ICE Clear Europe included statements concerning the purpose of and basis for the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. ICE Clear Europe has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

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[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A).

[4] 17 CFR 240.19b–4(f)(4)(i).

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

ICE Clear Europe submits proposed amendments to its Clearing Procedures to clarify the account categories in which positions of affiliates of Clearing Members are to be maintained, in light of applicable US and EU regulatory requirements. ICE Clear Europe does not propose to amend its Rules in connection with these changes.

Under CFTC rules, the positions of an affiliate of an FCM are considered "proprietary" for purposes of segregation requirements and thus cannot be held in a customer account.[5] As a result, FCMs, including FCM/BD Clearing Members, have historically carried such positions in their proprietary accounts. However, under the European Market Infrastructure Regulation ("EMIR"),[6] when applicable to ICE Clear Europe, a clearing member will be required to treat an affiliate as a client[7] for various purposes, and accordingly positions of the affiliate should be held in a separate account from the proprietary positions of the clearing member.[8] Accordingly, ICE Clear Europe proposes to establish new position-keeping accounts for use by FCM/BD Clearing Members for positions of their affiliates, which will be separate from the clearing member's own positions (and thus satisfy the EMIR requirement) but at the same time will not be customer accounts for purposes of applicable CFTC requirements. Although it is expected that these accounts will at present be principally relevant to F&O Contracts of affiliates of FCM/BD Clearing Members, the accounts would also be used for CDS Contracts of such persons, as and when ICE Clear Europe accepts such contracts cleared through FCM/BD Clearing Members.

Specifically, ICE Clear Europe proposes to amend paragraph 2.3(b) of the Clearing Procedures to establish new position-keeping accounts, labeled the "F" and "R" accounts, which will be required to be used for all positions of affiliates of FCM/BD Clearing Members. The "F" account will use a gross margin model (for positions in contracts margined on a gross basis under the Rules and Procedures); the "R" account will use a net margin model (for positions in contracts margined on a net basis under the Rules and Procedures). Both accounts will be treated as separate Proprietary Accounts for purposes of the Rules (and accordingly the accounts will not constitute Customer Accounts of the FCM/BD Clearing Member). New paragraph 2.3(f) has been added to provide a definition of "affiliate" for this purpose, based on the relevant definitions of proprietary accounts under CFTC rules.

Paragraph 2.3 has also been revised to clarify the treatment of positions of affiliates of Non-FCM/BD Clearing Members. New paragraph 2.3(f) also includes a definition of "affiliate" for this purpose, based on the EMIR definition of "group." Conforming changes have been made to paragraph 2.3(b)(4) to use such definition. Additional clarifications have been made in paragraph 2.3(b)(5) as to the use by certain Non-FCM/BD Clearing Members of the "T" and "K" accounts (as separate Segregated Customer Omnibus Accounts for F&O or Segregated TTFCA Customer Omnibus Accounts for F&O) and of the "F" and "R" accounts as available for holding positions of their affiliates. Paragraph 2.3(c) has been revised to clarify that the Clearing House may establish additional position-keeping accounts for a Clearing Member to facilitate separate tracking of positions for each exchange non-clearing member for which the Clearing Member provides services. The revisions also clarify the treatment of such position-keeping accounts for exchange members as customer or proprietary, consistent with the requirements of the Rules and Clearing Procedures and applicable law.

Amendments to paragraph 3.1(a) of the Clearing Procedures provide for the margining of the "F" and "R" accounts of FCM/BD Clearing members as separate Proprietary Accounts. The summary table following paragraph 3.2 of the Clearing Procedures has been amended to conform to the other changes made in the Clearing Procedures.

2. Statutory Basis

ICE Clear Europe believes that the proposed amendments to the Clearing Procedures are consistent with the requirements of Section 17A of the Act[9] and the regulations thereunder applicable to it.[10] Section 17A(b)(3)(F) of the Act[11] requires, among other things, that the rules of a clearing agency be designed to promote the prompt and accurate clearance and settlement of securities transactions and, to the extent applicable, derivative agreements, contracts, and transactions, to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible and to protect investors and the public interest.

The amendments are designed to clarify the treatment of positions of affiliates of Clearing Members in light of applicable legal and regulatory requirements. Specifically, for FCM/BD Clearing Members, the amendments establish separate accounts in which such positions must be held, in a manner that is consistent with both CFTC and EMIR requirements. Such accounts will allow positions of affiliates to be held separately from the Clearing Member's positions, consistent with the EMIR requirements, but will be treated as Proprietary Accounts under the Rules and Procedures, consistent with CFTC rules. The amendments also clarify the treatment of positions of affiliates of Non-FCM/BD Clearing Members, consistent with EMIR requirements. Overall, in ICE Clear Europe's view, the amendments will enhance its ability (and that of its Clearing Members) to track positions of Clearing Member affiliates and comply with relevant regulatory obligations. As a result, in ICE Clear Europe's view, the amendments will promote the prompt and accurate clearance and settlement of derivative transactions, are consistent with the safeguarding of funds and securities in the custody or control of ICE Clear Europe, and generally further the public interest. The amendments are therefore consistent with the requirements of Section 17A(b)(3)(F) of the Act[12] and the regulations thereunder.[13]

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[5] *See, e.g.,* 17 CFR 1.3(y), 17 CFR 1.20(e)(2).

[6] Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, as well as various implementing regulations and technical standards.

[7] EMIR Article 2(15). EMIR defines "client" as "an undertaking with a contractual relationship with a clearing member of a CCP which enables that undertaking to clear its transactions with that CCP," which suggests that an affiliate can be a client of a clearing member. This understanding of a client is supported in other EU legislation such as MiFID (see Directive 2004/39/EC of the European Parliament and of the Council on 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC), and in UK case law where affiliates have consistently been treated as clients to whom regulatory obligations were owed. *See Re Lehman Brothers International (Europe) (in administration)* [2012] UKSC 6.

[8] EMIR Article 39(4).

[9] 15 U.S.C. 78q–1.

[10] 17 CFR 240.17Ad–22.

[11] 15 U.S.C. 78q–1(b)(3)(F).

[12] 15 U.S.C. 78q–1(b)(3)(F).

[13] 17 CFR 240.17Ad–22.

B. Self-Regulatory Organization's Statement on Burden on Competition

ICE Clear Europe does not believe the proposed changes to the Rules discussed herein would have any adverse impact, or impose any burden, on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposed amendments are intended to clarify the treatment of positions of affiliates of Clearing Member, consistent with applicable legal requirements. ICE Clear Europe does not believe the proposed amendments would adversely affect access to clearing by Clearing Members or their affiliates (or customers), adversely affect competition among Clearing Members or adversely affect the market for clearing services or limit market participants' choices for clearing transactions. Although the proposed amendments may impose additional compliance costs on Clearing Members, including because of the requirements to hold affiliate positions in separate accounts that are separately margined, ICE Clear Europe believes that such costs reflect, and are appropriate in light of, the legal requirements applicable to such positions. Although the amendments treat affiliate positions of FCM/BD Clearing Members and Non-FCM/BD Clearing Members differently in certain respects, in ICE Clear Europe's view such differences also result from the different legal frameworks applicable to such Clearing Members. As a result, ICE Clear Europe does not believe that the proposed amendments to the Clearing Procedures will impose any burden on competition not appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

ICE Clear Europe has not solicited or received any written comments with respect to the proposed changes. ICE Clear Europe will notify the Commission of any written comments received by ICE Clear Europe.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective upon filing pursuant to Section 19(b)(3)(A)[14] of the Act and Rule 19b-4(f)(4)(i)[15] thereunder. The amendments effect a change in an existing service of a registered clearing agency that does not adversely affect the safeguarding of securities or funds in the custody or control of the clearing agency or for which it is responsible, and does not significantly affect the respective rights or obligations of the clearing agency or persons using its clearing service, within the meaning of Rule 19b-4(f)(4)(i).[16] As noted above, the amendments provide for a separate proprietary account to be used for positions of affiliates of FCM/BD Clearing Members (as opposed to combining such positions in the same account as the Clearing Member's own positions), in order to be consistent with both CFTC and EMIR requirements. The amendments also provide that such accounts will be margined separately. Certain other clarifications are made with respect to the accounts used for positions of affiliates of Non-FCM/BD Clearing Members. In ICE Clear Europe's view, these changes will not adversely affect the safeguarding of funds or securities in the custody or control of ICE Clear Europe, from the perspective of Clearing Members or their affiliates or customers. Although the amendments impose certain additional requirements on Clearing Members that carry positions on behalf of their affiliates in terms of the use of a separate account, ICE Clear Europe also believes that the amendments will not significantly affect the rights or obligations of ICE Clear Europe or Clearing Members using its clearing services. As a result, ICE Clear Europe views these amendments as falling within Rule 19b-4(f)(4)(i).[17]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*) or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR-ICEEU-2016-006 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549-1090.

All submissions should refer to File Number SR-ICEEU-2016-006. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filings will also be available for inspection and copying at the principal office of ICE Clear Europe and on ICE Clear Europe's Web site at *https://www.theice.com/clear-europe/regulation#rule-filings.*

All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-ICEEU-2016-006 and should be submitted on or before June 7, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016-11539 Filed 5-16-16; 8:45 am]

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[14] 15 U.S.C. 78s(b)(3)(A).

[15] 17 CFR 240.19b-4(f)(4)(i).

[16] 17 CFR 240.19b-4(f)(4)(i).

[17] 17 CFR 240.19b-4(f)(4)(i).

[18] 17 CFR 200.30-3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77810; File No. SR–BatsEDGA–2016–07]

Self-Regulatory Organizations; Bats EDGA Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Rule 11.11, Routing to Away Trading Centers, To Delete the IOCM and ICMT Routing Options

May 11, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on May 2, 2016, Bats EDGA Exchange, Inc. f/k/a EDGA Exchange, Inc. (the "Exchange" or "EDGA") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Exchange has designated this proposal as a "non-controversial" proposed rule change pursuant to Section 19(b)(3)(A) of the Act[3] and Rule 19b–4(f)(6)(iii) thereunder,[4] which renders it effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange filed a proposal to amend Rule 11.11, Routing to Away Trading Centers, to delete the IOCM and ICMT routing options. The Exchange also proposes to amend its fee schedule to delete: (i) References to the IOCM and ICMT routing options under footnotes 7 and 12; and (ii) fee code MT, which is yielded on MidPoint Peg Orders[5] routed to Bats EDGX Exchange, Inc. ("EDGX") using the IOCM or ICMT routing options.

The text of the proposed rule change is available at the Exchange's Web site at *www.batstrading.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend Rule 11.11, Routing to Away Trading Centers, to delete the IOCM and ICMT routing options. The Exchange also proposes to amend its fee schedule to delete: (i) References to the IOCM and ICMT routing options under footnotes 7 and 12; and (ii) fee code MT, which is yielded on MidPoint Peg Orders routed to EDGX using the IOCM or ICMT routing options.

Under Rule 11.11(g)(11), an order utilizing the IOCM routing option checks the System[6] for available shares and then is sent, as MidPoint Peg Order with a Time-in-Force of IOC, to EDGX. Under Rule 11.11(g)(12), an order utilizing the ICMT routing option checks the System for available shares, then is sent to destinations on the System routing table and then is sent, as MidPoint Peg Order with a Time-in-Force of IOC, to EDGX. If shares remain unexecuted after routing pursuant to both the IOCM and ICMT routing options, they are posted on the book, unless otherwise instructed by the User.[7]

Fee codes CR and XR are yielded to orders that remove liquidity from the Exchange using an eligible routing option. Footnote 7 of the Exchanges fee schedule lists the eligible routing options for fee code XR, which includes the IOCM routing option and footnote 12 lists the eligible routing options for fee code CR, which includes the ICMT routing option. Fee code MT is yielded on MidPoint Peg Orders routed to EDGX using the IOCM or ICMT routing options. Orders that yield fee code MT pay a fee of $0.0029 per share in securities priced at or above $1.00 and 0.30% of the trade's dollar value for securities priced below $1.00.[8]

Because few Users elect the IOCM or ICMT routing options, the Exchange has determined that the current demand does not warrant the infrastructure and ongoing maintenance expenses required to support the products. Therefore, the Exchange proposes to delete the IOCM and ICMT routing options under Rule 11.11(g)(11) and (12) as well as a reference to the IOCM and ICMT routing options under Rule 11.11(g)(15). The Exchange also proposes to amend its fee schedule to delete: (i) References to the IOCM and ICMT routing options under footnotes 7 and 12; and (ii) fee code MT, which is yielded on MidPoint Peg Orders routed to EDGX using the IOCM or ICMT routing options. Users seeking to route midpoint eligible orders to EDGX may use alternative methods, such as connecting to EDGX directly or through a third party service provider, or electing another routing option offered by the Exchange that enables a User to post an order to certain primary listing markets.[9]

The Exchange intends to implement the proposed rule change on May 6, 2016.[10]

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act[11] in general, and furthers the objectives of Section 6(b)(5) of the Act[12] in particular, in that it is designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest.

The Exchange does not believe that this proposal will permit unfair discrimination among customers, brokers, or dealers because the IOCM and ICMT routing options will no longer be available to all Users. The Exchange has few Users electing the IOCM and ICMT routing options and has determined that the current demand does not warrant the infrastructure and ongoing maintenance expense required to support the products. Routing through the Exchange is voluntary and alternative routing options offered by the Exchange as well as other methods remain available to Users that wish to route midpoint eligible orders to EDGX.[13] In addition, the IOCM and ICMT routing options are not core product offerings by the Exchange, nor is the Exchange required by the Act to offer such products. Therefore, the Exchange believes the proposed rule change would make its rules clearer and less confusing for investors by removing routing options that will no longer be offered by the Exchange; thereby removing impediments to and perfecting the mechanism of a free and open market and a national market system, and, in general, protecting investors and the public interest.

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[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A).

[4] 17 CFR 240.19b–4(f)(6)(iii).

[5] *See* Exchange Rule 11.8(d).

[6] The "System" is the Exchange's electronic communications and trading facility designated by the Board through which securities orders of Users are consolidated for ranking, execution and, when applicable, routing away. *See* Exchange Rule 1.5(cc).

[7] The term "User" is defined as "any Member or Sponsored Participant who is authorized to obtain access to the System pursuant to Rule 11.3." *See* Exchange Rule 1.5(ee).

[8] These rates represents the pass through the rate that BATS Trading, Inc. ("BATS Trading"), the Exchange's affiliated routing broker-dealer, is charged for routing MidPoint Peg Orders to EDGX when it does not qualify for a volume tiered reduced fee.

[9] *See e.g.,* Rule 11.11(g)(13) (describing the RMPT routing option under which a MidPoint Peg Order checks the System for available shares and any remaining shares are then sent to destinations on the System routing table that support midpoint eligible orders. If any shares remain unexecuted after routing, they are posted on the EDGA book as a MidPoint Peg Order, unless otherwise instructed by the User).

[10] *See Bats to Decommission ICMT, IOCM, and TRIM3 Routing Strategies,* issued April 18, 2016, *available at http://cdn.batstrading.com/resources/release_notes/2016/Bats-to-Decommission-ICMT-IOCM-and-TRIM3-Routing-Strategies.pdf.*

[11] 15 U.S.C. 78f(b).

[12] 15 U.S.C. 78f(b)(5).

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposal will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposed rule change is not designed to address any competitive issues but rather avoid investor confusion by eliminating the IOCM and ICMT routing options that are to be discontinued by the Exchange.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has neither solicited nor received written comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the proposed rule change does not (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[14] and Rule 19b–4(f)(6) thereunder.[15]

A proposed rule change filed pursuant to Rule 19b–4(f)(6) under the Act[16] normally does not become operative for 30 days after the date of its filing. However, Rule 19b–4(f)(6)(iii)[17] permits the Commission to designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Exchange states that waiver of the 30-day operative delay would allow the Exchange to modify its rules in a timely manner by: (i) Eliminating a rule that accounts for services with few subscribers that the Exchange intends to discontinue; and (ii) accurately describing the alternative routing options available to Users, thereby avoiding potential investor confusion during the operative delay period. Based on the foregoing, the Commission believes the waiver of the operative delay is consistent with the protection of investors and the public interest. Therefore, the Commission hereby waives the operative delay and designates the proposal operative upon filing.[18]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File No. SR–BatsEDGA–2016–07 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File No. SR–BatsEDGA–2016–07. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File No. SR–BatsEDGA–2016–07, and should be submitted on or before June 7, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[19]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11540 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

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[13] *See supra* note 9 and accompanying text.

[14] 15 U.S.C. 78s(b)(3)(A).

[15] 17 CFR 240.19b–4(f)(6). As required under Rule 19b–4(f)(6)(iii), the Exchange provided the Commission with written notice of its intent to file the proposed rule change, along with a brief description and the text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission.

[16] 17 CFR 240.19b–4(f)(6).

[17] 17 CFR 240.19b–4(f)(6)(iii).

[18] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[19] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77813; File No. SR–BatsEDGX–2016–15]

Self-Regulatory Organizations; Bats EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Fees as They Apply to the Equity Options Platform

May 11, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on May 2, 2016, Bats EDGX Exchange, Inc. (the "Exchange" or "EDGX") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II and III below, which Items have been prepared by the Exchange. The Exchange has designated the proposed rule change as one establishing or changing a member due, fee, or other charge imposed by the Exchange under Section 19(b)(3)(A)(ii) of the Act[3] and Rule 19b–4(f)(2) thereunder,[4] which renders the proposed rule change effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange filed a proposal to amend the fee schedule applicable to Members[5] and non-members of the Exchange pursuant to EDGX Rules 15.1(a) and (c).

The text of the proposed rule change is available at the Exchange's Web site at *www.batstrading.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its fee schedule for its equity options platform ("EDGX Options") to: (1) Modify an existing tier and add a new tier to its existing tiered pricing structure; and (2) simplify the Exchange's routing fees, as further described below.

Tiered Pricing Changes

The Exchange currently offers two pricing tiers under footnotes 1 and 2 of the fee schedule, Customer Volume Tiers and Market Maker Volume Tiers, respectively. Under the tiers, Members that achieve certain volume criteria may qualify for reduced fees or enhanced rebates for Customer[6] and Market Maker[7] orders. The Exchange proposes to modify Customer Volume Tier 6 under footnote 1 and to add an additional Market Maker Volume Tier under footnote 2, as further described below.

Fee code PC and NC are currently appended to all Customer orders in Penny Pilot Securities[8] and Non-Penny Pilot Securities,[9] respectively, and result in a standard rebate of $0.01 per contract. The Customer Volume Tiers in footnote 1 consist of six separate tiers, each providing an enhanced rebate to a Member's Customer orders that yield fee codes PC or NC upon satisfying monthly volume criteria required by the respective tier. For instance, pursuant to Customer Volume Tier 1, the lowest volume tier, a Member will receive a rebate of $0.05 per contract where the Member has an ADV[10] in Customer orders equal to or greater than 0.10% of average TCV.[11]

Pursuant to Customer Volume Tier 6, a Member currently will receive a rebate of $0.21 per contract where: (1) The Member has an ADV in Customer orders equal to or greater than 0.25% of average TCV; and (2) the Member has an ADV in Market Maker orders equal to or greater than 0.25% of average TCV. In order to encourage the entry of additional orders to the Exchange, Exchange proposes to modify Customer Volume Tier 6 to reduce the criteria necessary to qualify. Specifically, the Exchange proposes to provide the same rebate, $0.21 per contract, as it currently provides for Customer Volume Tier 6, but to provide such rebate where: (1) The Member has an ADV in Customer orders equal to or greater than 0.20% of average TCV; and (2) the Member has an ADV in Market Maker orders equal to or greater than 0.15% of average TCV. The Exchange believes that this change will make Customer Volume Tier 6 more attainable for additional Members.

Fee code PM and NM are currently appended to all Market Maker orders in Penny Pilot Securities and Non-Penny Pilot Securities, respectively, and result in a standard fee of $0.19 per contract. The Market Maker Volume Tiers in footnote 2 consist of six separate tiers, each providing a reduced fee or rebate to a Member's Market Maker orders that yield fee codes PM or NM upon satisfying monthly volume criteria required by the respective tier. For instance, pursuant to Market Maker Volume Tier 1, the lowest volume tier, a Member will pay a reduced fee of $0.16 per contract where the Member has an ADV in Market Maker orders equal to or greater than 0.05% of average TCV. Pursuant to Market Maker Volume Tier 6, the highest volume tier, a Member will receive a rebate of $0.01 per contract where the Member has an ADV in Market Maker orders equal to or greater than 1.10% of average TCV.

In addition to the change to the qualifying criteria for Customer Volume Tier 6 set forth above, the Exchange proposes to adopt a new Market Maker Volume Tier with the same criteria as amended Customer Volume Tier 6. Specifically, the Exchange proposes to adopt Market Maker Volume Tier 7, providing a reduced fee of $0.10 per contract where: (1) The Member has an ADV in Customer orders equal to or greater than 0.20% of average TCV; and (2) the Member has an ADV in Market Maker orders equal to or greater than 0.15% of average TCV. As with all other fees and rebates pursuant to footnote 2, the fee would be charged for transactions yielding fee code PM and NM.

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[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(ii).

[4] 17 CFR 240.19b–4(f)(2).

[5] The term "Member" is defined as "any registered broker or dealer that has been admitted to membership in the Exchange." *See* Exchange Rule 1.5(n).

[6] The term "Customer" applies to any transaction identified by a Member for clearing in the Customer range at the Options Clearing Corporation ("OCC"), excluding any transaction for a Broker Dealer or a "Professional" as defined in Exchange Rule 16.1.

[7] The term "Market Maker" applies to any transaction identified by a Member for clearing in the Market Maker range at the OCC, where such Member is registered with the Exchange as a Market Maker as defined in Rule 16.1(a)(37).

[8] The term "Penny Pilot Security" applies to those issues that are quoted pursuant to Exchange Rule 21.5, Interpretation and Policy .01.

[9] The term "Non-Penny Pilot Security" applies to those issues that are not Penny Pilot Securities quoted pursuant to Exchange Rule 21.5, Interpretation and Policy .01.

[10] "ADV" means average daily volume calculated as the number of contracts added or removed, combined, per day.

[11] "TCV" means total consolidated volume calculated as the volume reported by all exchanges to the consolidated transaction reporting plan for the month for which the fees apply, excluding volume on any day that the Exchange experiences an Exchange System Disruption and on any day with a scheduled early market close.

The Exchange notes that the reduced fee of $0.10 per contract is the same fee as Market Maker Volume Tier 3, which is provided where the Member has an ADV in Market Maker orders equal to or greater than 0.20% of average TCV. By introducing Tier 7, the Exchange is providing an additional mechanism for a Member to achieve this reduced fee. The Exchange also notes that the proposed fee and associated criteria are intended to encourage the entry of both Customer orders and Market Maker orders by providing a hybrid tier that rewards the entry of both. Although the qualifying criteria includes Customer orders, as noted above, the proposed reduced fee of $0.10 per contract would only be awarded to a Member's Market Maker orders that yield fee codes PM or NM upon satisfying the monthly volume criteria (and not such Member's Customer orders). However, as noted above, because the criteria are the same, a Member qualifying for Market Maker Volume Tier 7 would also qualify for Customer Volume Tier 6, and thus would be entitled to enhanced rebates for such Member's Customer orders.

In addition to the changes described above, the Exchange proposes to add the phrase "of average TCV" to the end of the criteria for existing Market Making Volume Tiers 1 through 6. Although the filing initially adopting such tiers did include the language in describing the applicable criteria, the Exchange believes that such language is appropriate for the fee schedule. This change would ensure that the language of footnote 2 is consistent with footnote 1, which does include this phrase in each Tier's criteria description. The Exchange also proposes to change all references to "Customer Orders" to "Customer orders" and from "Market Maker Orders" to "Market Maker orders" throughout footnote 1 and footnote 2. These changes will also ensure consistency on the fee schedule with respect to the word "order", which is not contained in any of the defined terms on the fee schedule.

Routing Fees

The Exchange proposes to modify the fees charged for orders routed away from the Exchange and executed at various away options exchanges. The Exchange currently has specific rates and associated fee codes for each away options exchange.[12] Such rates are further divided at each options exchange into either two categories in order to differentiate between Customer and Non-Customer[13] orders or into four categories in order to differentiate between Customer and Non-Customer orders and then into Penny Pilot Securities and Non-Penny Pilot Securities.[14] In order to simplify routing fees for executions at away options exchanges, the Exchange proposes to charge flat rates for routing to other options exchanges that have been placed into groups based on the approximate cost of routing to such venues. The grouping of away options exchanges is based on the cost of transaction fees assessed by each venue as well as costs to the Exchange for routing (*i.e.,* clearing fees, connectivity and other infrastructure costs, membership fees, etc.) (collectively, "Routing Costs"). To address different fees at various other options exchanges, the Exchange proposes to adopt five different fees and associated fee codes applicable to routing to away options exchanges, as further described below.

With respect to Non-Customer orders, the Exchange proposes to adopt two fee codes: (1) Fee code RN, which would result in a fee of $0.85 per contract and would apply to all Non-Customer orders in Penny Pilot Securities; and (2) fee code RO, which would result in a fee of $1.20 per contract and would apply to all Non-Customer orders in Non-Penny Pilot Securities. The Exchange notes that the current range of fees applicable to Non-Customer orders routed to other options exchanges is from $0.60 per contract (fee code RF, applicable to Non-Customer orders in Penny Pilot Securities executed at BZX Options) to $1.25 per contract (fee code QG, applicable to Non-Customer orders executed at NOM in Non-Penny Pilot Securities).

With respect to Customer orders, the Exchange proposes to adopt three fee codes: (1) Fee code RP, which would result in a fee of $0.25 per contract and would apply to all Customer orders routed to and executed at AMEX, BOX, BX Options, CBOE, ISE Mercury, MIAX or PHLX; (2) fee code RQ, which would result in a fee of $0.70 per contract and would apply to all Customer orders in Penny Pilot Securities routed to and executed at ARCA, BZX Options, C2, ISE, ISE Gemini or NOM; and (3) fee code RR, which would result in a fee of $0.90 per contract and would apply to all Customer orders in Non-Penny Pilot Securities routed to and executed at ARCA, BZX Options, C2, ISE, ISE Gemini or NOM. The Exchange notes that the current range of fees applicable to Customer orders routed to other options exchanges is from no charge per contract (fee code BD, applicable to Customer orders in Non-Penny Pilot Securities executed at BX Options) to $0.94 per contract (fee code RD, applicable to Customer orders executed at BZX Options in Non-Penny Pilot Securities).[15]

As a general matter, the groupings described above in most instances attempt to differentiate between the Routing Costs applicable to either executions of orders in Penny Pilot Securities versus those in Non-Penny Pilot Securities or between fee ranges typical of exchanges that operate primarily a maker/taker or price/time market model (generally imposing higher fees, including for Customer orders) versus exchanges that operate primarily a pro rata or customer priority market model (generally imposing lower fees, especially for Customer orders).

As set forth above, the Exchange's proposed approach to routing fees is to set forth in a simple manner certain flat fees that approximate the cost of routing to other options exchanges. The Exchange will then monitor the fees charged as compared to the costs of its routing services, as well as monitoring for specific fee changes by other options exchanges, and intends to adjust its flat routing fees and/or groupings to ensure that the Exchange's fees do indeed result in a rough approximation of overall Routing Costs, and are not significantly higher or lower in any area. Although there may be instances where the Exchanges [sic] fee to a particular options exchange is indeed significantly higher than the fee charged by such options exchange, the Exchange believes that this is appropriate for several reasons discussed in further detail below, including the simplicity that it will provide Users of the Exchange's routing services.

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[12] Other options exchanges to which the Ewchange routes include: Bats BZX Exchange, Inc. ("BZX Options"), BOX Options Exchange LLC ("BOX"), Chicago Board Options Exchange, Inc. ("CBOE"), C2 Options Exchange, Inc. ("C2"), International Securities Exchange, Inc. ("ISE"), ISE Gemini, LLC ("ISE Gemini"), ISE Mercury, LLC ("ISE Mercury"), Miami International Securities Exchange, LLC ("MIAX") Nasdaq Options Market LLC ("NOM"), Nasdaq OMX BX LLC ("BX Options"), Nasdaq OMX PHLX LLC ("PHLX"), NYSE Arca, Inc ("ARCA"), and NYSE MKT LLC ("AMEX").

[13] The term "Non-Customer" applies to any transaction that is not a Customer order.

[14] The Exchange notes that it still applies a single rate for order routed to and executed at the newest options exchange, ISE Mercury.

[15] The Exchange again notes that it currently applies a single rate for orders routed to and executed at the newest options exchange, ISE Mercury. As such, Customer orders execute at ISE Mercury technically pay the highest rate today, a fee of $0.99 per contract.

Implementation Date

The Exchange proposes to implement these amendments to its fee schedule immediately.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder that are applicable to a national securities exchange, and, in particular, with the requirements of Section 6 of the Act.[16] Specifically, the Exchange believes that the proposed rule change is consistent with Section 6(b)(4) of the Act,[17] in that it provides for the equitable allocation of reasonable dues, fees and other charges among members and other persons using any facility or system which the Exchange operates or controls.

The Exchange believes its proposed fees and rebates pursuant to the tiered pricing structure are reasonable, fair and equitable, and non-discriminatory. The Exchange operates in a highly competitive market in which market participants may readily send order flow to many competing venues if they deem fees at the Exchange to be excessive. As a new options exchange, the proposed fee structure remains intended to attract order flow to the Exchange by offering market participants a competitive yet simple pricing structure. At the same time, the Exchange believes it is reasonable to incrementally adopt incentives intended to help to contribute to the growth of the Exchange.

Volume-based rebates such as those currently maintained on the Exchange have been widely adopted by options exchanges and are equitable because they are open to all Members on an equal basis and provide additional benefits or discounts that are reasonably related to the value of an exchange's market quality associated with higher levels of market activity, such as higher levels of liquidity provision and/or growth patterns, and introduction of higher volumes of orders into the price and volume discovery processes. The proposed modification to the Customer Volume Tier and the proposed addition of Market Maker Volume Tier 7 is each intended to incentivize Members to send additional Customer orders and Market Maker orders to the Exchange in an effort to qualify for the enhanced rebate or lower fee made available by the tiers.

The Exchange believes that the proposed tiers are reasonable, fair and equitable, and non-discriminatory, for the reasons set forth above with respect to volume-based pricing generally and because such changes will incentivize participants to further contribute to market quality. The proposed tiers will provide an additional way for market participants to qualify for enhanced rebates or reduced fees. The Exchange also believes that the proposed tiered pricing structure is consistent with pricing previously offered by the Exchange as well as other options exchanges and does not represent a significant departure from such pricing structures.[18]

With respect to the proposed routing structure, the Exchange again notes that it operates in a highly competitive market in which market participants can readily direct order flow to competing venues or providers of routing services if they deem fee levels to be excessive. As explained above, the Exchange proposes to approximate the cost of routing to other options exchanges, including other applicable costs to the Exchange for routing, in order to provide a simplified and easy to understand pricing model. The Exchange believes that a pricing model based on approximate Routing Costs is a reasonable, fair and equitable approach to pricing. Specifically, the Exchange believes that its proposal to modify fees is fair, equitable and reasonable because the fees are generally an approximation of the cost to the Exchange for routing orders to such exchanges. The Exchange believes that its flat fee structure for orders routed to various venues is a fair and equitable approach to pricing, as it will provide certainty with respect to execution fees at groups of away options exchanges. In order to achieve its flat fee structure, taking all costs to the Exchange into account, the Exchange will necessarily charge a higher premium to route to certain options exchanges than to others. As a general matter, the Exchange believes that the proposed fees will allow it to recoup and cover its costs of providing routing services to such exchanges and to make some additional profit in exchange for the services it provides. The Exchange also believes that the proposed fee structure for orders routed to and executed at these away options exchanges is fair and equitable and not unreasonably discriminatory in that it applies equally to all Members. Finally, the Exchange notes that it intends to consistently evaluate its routing fees, including profit and loss attributable to routing, as applicable, in connection with the operation of a flat fee routing service, and would consider future adjustments to the proposed pricing structure to the extent it was recouping a significant profit or loss from routing to away options exchanges.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange believes the proposed amendments to its fee schedule would not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. Rather, the proposal is a competitive proposal that is seeking to further the growth of the Exchange and to simplify the Exchange's fees for routing orders to away options exchanges. With respect to the tiered pricing changes, the Exchange has structured the proposed fees and rebates to attract additional volume in Market Maker and Customer orders, however, the Exchange believes that its pricing for all capacities is competitive with that offered by other options exchanges. With respect to the proposed routing fee structure, the Exchange believes that the proposed fees are competitive in that they will provide a simple approach to routing pricing that some Members may favor. Additionally, Members may opt to disfavor the Exchange's pricing, including pricing for transactions on the Exchange as well as routing fees, if they believe that alternatives offer them better value. In particular, with respect to routing services, such services are available to Members from other broker-dealers as well as other options exchanges. The Exchange also notes that Members may choose to mark their orders as ineligible for routing to avoid incurring routing fees.[19] Accordingly, the Exchange does not believe that the proposed change will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets.

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[16] 15 U.S.C. 78f.

[17] 15 U.S.C. 78f(b)(4).

[18] *See, e.g.,* Bats BZX Options Fee Schedule, Footnote 1, Customer Add Volume Tier 5, which provides an enhanced rebate to Customer orders on BZX Options based on both Customer volume and Market Maker volume. The BZX Options Fee Schedule is available at: *http://www.batsoptions.com/support/fee__schedule/bzx/.*

[19] *See* Exchange Rule 21.1(d)(7) (describing "Book Only" orders) and Exchange Rule 21.9(a)(1) (describing the Exchange's routing process, which requires orders to be designated as available for routing).

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any written comments from members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act[20] and paragraph (f)(2) of Rule 19b–4 thereunder.[21] At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File No. SR-BatsEDGX–2016–15 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File No. SR–BatsEDGX–2016–15. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml).* Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File No. SR–BatsEDGX–2016–15, and should be submitted on or before June 7, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[22]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11543 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

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[20] 15 U.S.C. 78s(b)(3)(A).

[21] 17 CFR 240.19b–4(f).

[22] 15 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77814; File No. SR–NYSEMKT–2016–50]

Self-Regulatory Organizations; NYSE MKT LLC; Notice of Filing and Immediate Effectiveness of Proposed Change Modifying the NYSE Amex Options Fee Schedule

May 11, 2016.

Pursuant to section 19(b)(1)[1] of the Securities Exchange Act of 1934 (the "Act")[2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on April 28, 2016, NYSE MKT LLC (the "Exchange" or "NYSE MKT") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to modify the NYSE Amex Options Fee Schedule ("Fee Schedule"). The Exchange proposes to implement the fee change effective May 2, 2016. The proposed change is available on the Exchange's Web site at *www.nyse.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of this filing is to modify the definition of a Firm Facilitation trade to include Broker-Dealers, which would be consistent with the treatment of such transactions on another options market. The Exchange proposes to implement the change effective on May 2, 2016.

The current Fee Schedule defines a "Firm Facilitation" trade as "a Manual trade that is executed in open outcry, in which one counterparty clears in the Firm range at the OCC, the other counterparty clears in the Customer range at the OCC, and both counterparties have the same Clearing Member symbol or identification."[4] Firm Facilitation trades are not subject to transaction charges and are only subject to Royalty Fees.[5]

The Exchange proposes to modify the definition of Firm Facilitation to include Manual trades clearing in the

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[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] *See* Fee Schedule, Terms and Definitions, *available here, https://www.nyse.com/publicdocs/nyse/markets/amex-options/NYSE_Amex_Options_Fee_Schedule.pdf.*

[5] *See id.,* Fee Schedule, sections I. A. and B. (providing that Firm Facilitation trades are executed at the rate of $0.00 per contract) and K. (providing that Firm Facilitation trades are subject to Royalty Fees). The Exchange notes that Royalty Fees (or license fees) apply to certain classes of options and such fees are passed-on by the Exchange to the actual participants executing the trade.

Broker-Dealer range at the OCC.[6] The Exchange notes that this proposal would align its definition of a Firm Facilitation trade with that of another options exchange. Specifically, the fee schedule for NYSE Arca provides that firm facilitation trades are manual trades that apply to "any transaction involving a Firm proprietary trading account that has a customer of that same Firm on the contra side of the transaction, or a broker dealer facilitating a Customer order, where the broker dealer and the Customer both clear through the same clearing firm and the broker dealer clears in the customer range." [7]

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with section 6(b) of the Act,[8] in general, and furthers the objectives of sections 6(b)(4) and (5) of the Act,[9] in particular, because it provides for the equitable allocation of reasonable dues, fees, and other charges among its members, issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers.

The Exchange believes that the proposed modification to the definition of Firm Facilitation trades is reasonable, equitable and not unfairly discriminatory because it would align the scope of such trades with how trades are characterized on at least one other options exchange, thereby encouraging greater harmonization across exchange. Additionally, the Exchange believes the proposed change is consistent with the Act because they it attract greater volume and liquidity to the Exchange, which would benefit all market participants by providing tighter quoting and better prices, all of which perfects the mechanism for a free and open market and national market system.

For these reasons, the Exchange believes that the proposal is consistent with the Act.

B. Self-Regulatory Organization's Statement on Burden on Competition

In accordance with section 6(b)(8) of the Act,[10] the Exchange does not believe that the proposed rule change would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange believes the proposed amendment is pro-competitive as expanding the definition of Firm Facilitation trades consistent with other markets may encourage additional order flow to be direction to the Exchange and any resulting increase in volume and liquidity to the Exchange would benefit all Exchange participants through increased opportunities to trade as well as enhancing price discovery.

The Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues. In such an environment, the Exchange must continually review, and consider adjusting, its fees and credits to remain competitive with other exchanges. For the reasons described above, the Exchange believes that the proposed rule change reflects this competitive environment.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to section 19(b)(3)(A) [11] of the Act and subparagraph (f)(2) of Rule 19b–4 [12] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under section 19(b)(2)(B) [13] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSEMKT–2016–50 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEMKT–2016–50. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEMKT–2016–50, and should be submitted on or before June 7, 2016.

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[6] *See* proposed Fee Schedule. Per the Fee Schedule, a "Firm" means a Broker-Dealer that is not registered as a dealer-specialist or Market Maker that is an ATP Holder on the Exchange, per Rule 900.2NY(28) and a "Broker-Dealer" is an entity registered pursuant to section 15 of the Exchange Act, per Rule 990NY(3). *See* Fee Schedule, *supra* n. 4.

[7] *See* NYSE Arca fee schedule, Endnote 7, *available here, https://www.nyse.com/publicdocs/nyse/markets/arca-options/NYSE_Arca_Options_Fee_Schedule.pdf* (describing Firm Facilitation and Broker Dealer facilitating a Customer—Manual). NYSE Arca likewise does not charge transaction fees for firm facilitation trades.

[8] 15 U.S.C. 78f(b).

[9] 15 U.S.C. 78f(b)(4) and (5).

[10] 15 U.S.C. 78f(b)(8).

[11] 15 U.S.C. 78s(b)(3)(A).

[12] 17 CFR 240.19b–4(f)(2).

[13] 15 U.S.C. 78s(b)(2)(B).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[14]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11544 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Investment Company Act Release No. 32113; File No. 812–14561]

TCW Alternative Funds, et al.; Notice of Application

May 11, 2016.

AGENCY: Securities and Exchange Commission (“Commission”).

ACTION: Notice of an application for an order pursuant to: (a) Section 6(c) of the Investment Company Act of 1940 (“Act”) granting an exemption from sections 18(f) and 21(b) of the Act; (b) section 12(d)(1)(J) of the Act granting an exemption from section 12(d)(1) of the Act; (c) sections 6(c) and 17(b) of the Act granting an exemption from sections 17(a)(1), 17(a)(2) and 17(a)(3) of the Act; and (d) section 17(d) of the Act and rule 17d–1 under the Act to permit certain joint arrangements and transactions.

Summary of the Application: Applicants request an order that would permit certain registered open-end management investment companies to participate in a joint lending and borrowing facility.

Applicants: TCW Alternative Funds and Metropolitan West Funds (each a “Trust” and collectively the “Trusts”), TCW Funds, Inc. (the “Corporation”); TCW Investment Management Company (“TCWIMC”) and Metropolitan West Asset Management, LLC (“MWAM”) (each, an “Adviser,” and such entities together, the “Advisers”).

Filing Dates: The application was filed on October 5, 2015, and amended on January 28, 2016 and May 10, 2016.

Hearing or Notification of Hearing: An order granting the requested relief will be issued unless the Commission orders a hearing. Interested persons may request a hearing by writing to the Commission’s Secretary and serving applicants with a copy of the request, personally or by mail.

Hearing requests should be received by the Commission by 5:30 p.m. on June 6, 2016, and should be accompanied by proof of service on the applicants, in the form of an affidavit, or, for lawyers, a certificate of service. Pursuant to Rule 0–5 under the Act, hearing requests should state the nature of the writer’s interest, any facts bearing upon the desirability of a hearing on the matter, the reason for the request, and the issues contested. Persons who wish to be notified of a hearing may request notification by writing to the Commission’s Secretary.

ADDRESSES: Secretary, U.S. Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090; Applicants: 865 S. Figueroa Street, Suite 1800, Los Angeles, CA 90017.

FOR FURTHER INFORMATION CONTACT: Mark N. Zaruba, Senior Counsel, at (202) 551–6878 or Mary Kay Frech, Branch Chief, at (202) 551–6821 (Division of Investment Management, Chief Counsel’s Office).

SUPPLEMENTARY INFORMATION: The following is a summary of the application. The complete application may be obtained via the Commission’s Web site by searching for the file number, or an applicant using the Company name box, at *http://www.sec.gov/search/search.htm* or by calling (202) 551–8090.

Applicants’ Representations

1. Each Trust is organized as a Delaware statutory trust and is registered under the Act as an open-end management investment company. The Corporation is a Maryland corporation and is registered as an open-end management investment company. Each Trust and the Corporation has issued one or more series, each of which has its own investment objective and its own investment policies.[1] TCWIMC is a California corporation and MWAM is a California limited liability company, and each of TCWIMC and MWAM is registered as an investment adviser under the Investment Advisers Act of 1940 (“Advisers Act”). Both are wholly-owned subsidiaries (direct or indirect) of the TCW Group, Inc., which, in turn, is owned indirectly by two investment funds that are controlled by The Carlyle Group, L.P. In the future, the Advisers may advise Funds that are money market funds that comply with rule 2a–7 under the Act (collectively, the “Money Market Funds”).[2]

2. The Funds may lend cash to banks or other entities by entering into repurchase agreements or purchasing short-term instruments. The Funds may also need to borrow money for temporary purposes. In order to meet an unexpected volume of redemptions or to cover unanticipated cash shortfalls, the Metropolitan West Funds have contracted for a revolving credit facility with the Bank of New York Mellon Corporation, and other lenders that may be added in the future to the lending syndicate (“Bank Borrowing”). The TCW Alternative Funds and TCW Funds, Inc. may in the future join this credit facility or enter into other arrangements with other bank lenders (each also a “Bank Borrowing”). The amount of borrowing under each of these lines of credit is limited to the amount specified by fundamental investment restrictions, the terms specified in the agreements, and/or other policies of the applicable Fund and section 18 of the Act.

3. If Funds that experience a cash shortfall were to draw down on their Bank Borrowing, they would pay interest at a rate that is likely to be higher than the rate that could be earned by non-borrowing Funds on investments in repurchase agreements and other short-term money market instruments of the same maturity as the Bank Borrowing (“Short-Term Instruments”). Applicants assert the difference between the higher rate paid on Bank Borrowing and what the bank pays to borrow under repurchase agreements or other arrangements represents the bank’s profit for serving as the middleperson between a borrower and lender and is not attributable to any material difference in the credit quality or risk of such transactions.

4. The Funds seek to enter into master interfund lending agreements with each other (the “InterFund Program”) that would permit each Fund whose policies permit it to do so to lend money directly to and borrow money directly from other Funds for temporary purposes through the InterFund Program (an “Interfund Loan”). The Money Market Funds will not participate as borrowers. Applicants state that the requested will relief enable the Funds to access an available source of money and reduce costs incurred by the Funds that need to obtain loans for temporary purposes and permit those Funds that have cash

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[14] 17 CFR 200.30–3(a)(12).

[1] Applicants request that the order apply to any registered open-end management investment company or series thereof for which TCWIMC, MWAM or any successor thereto or an investment adviser controlling, controlled by, or under common control (within the meaning of section 2(a)(9) of the Act) with TCWIMC or MWAM or any successor thereto serves as investment adviser (each a “Fund” and collectively the “Funds” or each such investment adviser an “Adviser”). For purposes of the requested order, “successor” is limited to any entity that results from a reorganization into another jurisdiction or a change in the type of a business organization.

[2] All Funds that currently intend to rely on the requested order have been named as applicants. Any other Fund that relies on the requested order in the future will comply with the terms and conditions of the application.

available: (i) To earn a return on the money that they might not otherwise be able to invest; or (ii) to earn a higher rate of interest on investment of their short-term balances. Although the proposed InterFund Program would reduce the Funds' need to borrow from banks or through custodian drafts, the Funds would be free to establish and/or continue committed lines of credit or other borrowing arrangements with banks.

5. Applicants anticipate that the proposed InterFund Program would provide a borrowing Fund with significant savings at times when the cash position of the Fund is insufficient to meet temporary cash requirements. This situation could arise when shareholder redemptions exceed anticipated cash volumes and certain Funds have insufficient cash on hand to satisfy such redemptions. When the Funds liquidate portfolio securities to meet redemption requests, they often do not receive payment in settlement for up to three days (or longer for certain foreign transactions). However, redemption requests normally are effected on the day following the trade date. The proposed InterFund Program would provide a source of immediate, short-term liquidity pending settlement of the sale of portfolio securities.

6. Applicants also anticipate that a Fund could use the InterFund Program when a sale of securities "fails" due to circumstances beyond the Fund's control, such as a delay in the delivery of cash to the Fund's custodian or improper delivery instructions by the broker effecting the transaction. "Sales fails" may present a cash shortfall if the Fund has undertaken to purchase a security using the proceeds from securities sold. Alternatively, the Fund could: (i) "Fail" on its intended purchase due to lack of funds from the previous sale, resulting in additional cost to the Fund; or (ii) sell a security on a same-day settlement basis, earning a lower return on the investment. Use of the InterFund Program under these circumstances would enable the Fund to have access to immediate short-term liquidity.

7. While Bank Borrowing and/or custodian overdrafts generally could supply Funds with needed cash to cover unanticipated redemptions and sales fails, under the proposed InterFund Program, a borrowing Fund would pay lower interest rates than those that would be payable under short-term loans offered by banks or custodian overdrafts. In addition, Funds making short-term cash loans directly to other Funds would earn interest at a rate higher than they otherwise could obtain from investing their cash in Short-Term Instruments. Thus, applicants assert that the proposed InterFund Program would benefit both borrowing and lending Funds.

8. The interest rate to be charged to the Funds on any Interfund Loan (the "Interfund Loan Rate") would be the average of the "Repo Rate" and the "Bank Loan Rate," both as defined below. The Repo Rate would be the highest current overnight repurchase agreement rate available to a lending Fund. The Bank Loan Rate for any day would be calculated by the InterFund Program Team, as defined below, on each day an Interfund Loan is made according to a formula established by each Fund's board of trustees (the "Board") intended to approximate the lowest interest rate at which a bank short-term loan would be available to the Fund. The formula would be based upon a publicly available rate (*e.g.,* Federal funds rate and/or LIBOR) plus an additional spread of basis points and would vary with this rate so as to reflect changing bank loan rates. The initial formula and any subsequent modifications to the formula would be subject to the approval of each Fund's Board. In addition, the Board of each Fund would periodically review the continuing appropriateness of reliance on the formula used to determine the Bank Loan Rate, as well as the relationship between the Bank Loan Rate and current bank loan rates that would be available to the Fund.

9. Certain members of the Advisers' administration personnel (other than investment advisory personnel) (the "InterFund Program Team") would administer the InterFund Program. No portfolio manager of any Fund will serve as a member of the InterFund Program Team. Under the proposed InterFund Program, the portfolio managers for each participating Fund could provide standing instructions to participate daily as a borrower or lender. The InterFund Program Team on each business day would collect data on the uninvested cash and borrowing requirements of all participating Funds. Once the InterFund Program Team has determined the aggregate amount of cash available for loans and borrowing demand, the InterFund Program Team will allocate loans among borrowing Funds without any further communication from the portfolio managers of the Funds. Applicants anticipate that there typically will be far more available uninvested cash each day than borrowing demand. Therefore, after the InterFund Program Team has allocated cash for Interfund Loans, the InterFund Program Team will invest any remaining cash in accordance with the standing instructions of the relevant portfolio manager or such remaining amounts will be invested directly by the portfolio managers of the Funds.

10. The InterFund Program Team would allocate borrowing demand and cash available for lending among the Funds on what the InterFund Program Team believes to be an equitable basis, subject to certain administrative procedures applicable to all Funds, such as the time of filing requests to participate, minimum loan lot sizes, and the need to minimize the number of transactions and associated administrative costs. To reduce transaction costs, each Interfund Loan normally would be allocated in a manner intended to minimize the number of participants necessary to complete the loan transaction. The method of allocation and related administrative procedures would be approved by the Board of each of the Funds, including a majority of the Board members who are not "interested persons," as defined in section 2(a)(19) of the Act ("Independent Board Members"), to ensure that both borrowing and lending Funds participate on an equitable basis.

11. The InterFund Program Team, on behalf of the Advisers. would: (a) Monitor the Interfund Loan Rate and the other terms and conditions of the Interfund Loans; (b) limit the borrowings and loans entered into by each Fund to ensure that they comply with the Fund's investment policies and limitations; (c) implement and follow procedures designed to ensure equitable treatment of each Fund; and (d) make quarterly reports to the Board of each Fund concerning any transactions by the applicable Fund under the InterFund Program and the Interfund Loan Rate.

12. The Advisers, through the InterFund Program Team, would administer the InterFund Program as disinterested fiduciaries as part of their duties under the investment management and administrative agreements with each Fund and would receive no additional fee as compensation for its services in connection with the administration of the InterFund Program.

13. No Fund may participate in the InterFund Program unless: (a) The Fund has obtained shareholder approval for its participation, if such approval is required by law; (b) the Fund has fully disclosed all material information concerning the InterFund Program in its registration statement on Form N–1A; and (c) the Fund's participation in the InterFund Program is consistent with its

investment objectives, limitations and organizational documents.

14. As part of the Board's review of the continuing appropriateness of a Fund's participation in the proposed credit facility as required by condition 14, the Board of the Fund, including a majority of the Independent Board Members, also will review the process in place to appropriately assess: (i) If the Fund participates as a lender, any effect its participation may have on the Fund's liquidity risk; and (ii) if the Fund participates as a borrower, whether the Fund's portfolio liquidity is sufficient to satisfy its obligations under the facility along with its other liquidity needs.

15. In connection with the InterFund Program, applicants request an order under section 6(c) of the Act exempting them from the provisions of sections 18(f) and 21(b) of the Act; under section 12(d)(1)(J) of the Act exempting them from section 12(d)(1) of the Act; under sections 6(c) and 17(b) of the Act exempting them from sections 17(a)(1), 17(a)(2), and 17(a)(3) of the Act; and under section 17(d) of the Act and rule 17d–1 under the Act to permit certain joint arrangements and transactions.

Applicants' Legal Analysis

1. Section 17(a)(3) of the Act generally prohibits any affiliated person of a registered investment company, or affiliated person of an affiliated person, from borrowing money or other property from the registered investment company. Section 21(b) of the Act generally prohibits any registered management company from lending money or other property to any person, directly or indirectly, if that person controls or is under common control with that company. Section 2(a)(3)(C) of the Act defines an "affiliated person" of another person, in part, to be any person directly or indirectly controlling, controlled by, or under common control with, such other person. Section 2(a)(9) of the Act defines "control" as the "power to exercise a controlling influence over the management or policies of a company," but excludes circumstances in which "such power is solely the result of an official position with such company." Applicants state that the Funds may be under common control by virtue of having common investment advisers and/or by having common trustees, directors, managers and/or officers.

2. Section 6(c) of the Act provides that an exemptive order may be granted where an exemption is necessary or appropriate in the public interest and consistent with the protection of investors and the purposes fairly intended by the policy and provisions of the Act. Section 17(b) of the Act authorizes the Commission to exempt a proposed transaction from section 17(a) provided that the terms of the transaction, including the consideration to be paid or received, are fair and reasonable and do not involve overreaching on the part of any person concerned, and the transaction is consistent with the policy of the investment company as recited in its registration statement and with the general purposes of the Act. Applicants believe that the proposed arrangements satisfy these standards for the reasons discussed below.

3. Applicants assert that sections 17(a)(3) and 21(b) of the Act were intended to prevent a party with strong potential adverse interests to, and some influence over the investment decisions of, a registered investment company from causing or inducing the investment company to engage in lending transactions that unfairly inure to the benefit of such party and that are detrimental to the best interests of the investment company and its shareholders. Applicants assert that the proposed transactions do not raise these concerns because: (a) The Advisers, through the InterFund Program Team members, would administer the InterFund Program as disinterested fiduciaries as part of their duties under the investment management and administrative agreements with each Fund; (b) all Interfund Loans would consist only of uninvested cash reserves that the Fund otherwise would invest in short-term repurchase agreements or other short-term investments; (c) the Interfund Loans would not involve a greater risk than such other investments; (d) the lending Fund would receive interest at a rate higher than it could otherwise obtain through such other investments; and (e) the borrowing Fund would pay interest at a rate lower than otherwise available to it under its bank loan agreements or through custodian overdrafts and avoid the commitment fees associated with lines of credit. Moreover, applicants assert that the other terms and conditions that applicants propose also would effectively preclude the possibility of any Fund obtaining an undue advantage over any other Fund.

4. Section 17(a)(1) of the Act generally prohibits an affiliated person of a registered investment company, or any affiliated person of such a person, from selling securities or other property to the investment company. Section 17(a)(2) of the Act generally prohibits an affiliated person of a registered investment company, or any affiliated person of such a person, from purchasing securities or other property from the investment company. Section 12(d)(1) of the Act generally prohibits a registered investment company from purchasing or otherwise acquiring any security issued by any other investment company except in accordance with the limitations set forth in that section.

5. Applicants state that the obligation of a borrowing Fund to repay an Interfund Loan could be deemed to constitute a security for the purposes of sections 17(a)(1) and 12(d)(1). Applicants also state that any pledge of securities to secure an Interfund Loan by the borrowing Fund to the lending Fund could constitute a purchase of securities for purposes of section 17(a)(2) of the Act. Section 12(d)(1)(J) of the Act provides that the Commission may exempt persons or transactions from any provision of section 12(d)(1) if and to the extent that such exemption is consistent with the public interest and the protection of investors. Applicants contend that the standards under sections 6(c), 17(b), and 12(d)(1)(J) are satisfied for all the reasons set forth above in support of their request for relief from sections 17(a)(3) and 21(b) and for the reasons discussed below. Applicants state that the requested relief from section 17(a)(2) of the Act meets the standards of section 6(c) and 17(b) because any collateral pledged to secure an Interfund Loan would be subject to the same conditions imposed by any other lender to a Fund that imposes conditions on the quality of or access to collateral for a borrowing (if the lender is another Fund) or the same or better conditions (in any other circumstance).

6. Applicants state that section 12(d)(1) was intended to prevent the pyramiding of investment companies in order to avoid imposing on investors additional and duplicative costs and fees attendant upon multiple layers of investment companies. Applicants submit that the proposed InterFund Program does not involve these abuses. Applicants note that there will be no duplicative costs or fees to the Funds or their shareholders, and that each Adviser will receive no additional compensation for its services in administering the InterFund Program. Applicants also note that the purpose of the proposed InterFund Program is to provide economic benefits for all the participating Funds and their shareholders. Section 18(f)(1) of the Act prohibits open-end investment companies from issuing any senior security except that a company is permitted to borrow from any bank, provided, that immediately after the borrowing, there is asset coverage of at

least 300 per centum for all borrowings of the company. Under section 18(g) of the Act, the term "senior security" generally includes any bond, debenture, note or similar obligation or instrument constituting a security and evidencing indebtedness. Applicants request exemptive relief under section 6(c) from section 18(f)(1) to the limited extent necessary to implement the InterFund Program (because the lending Funds are not banks).

7. Applicants believe that granting relief under section 6(c) is appropriate because the Funds would remain subject to the requirement of section 18(f)(1) that all borrowings of a Fund, including combined Interfund Loans and bank borrowings, have at least 300% asset coverage. Based on the conditions and safeguards described in the application, applicants also submit that to allow the Funds to borrow from other Funds pursuant to the proposed InterFund Program is consistent with the purposes and policies of section 18(f)(1).

8. Section 17(d) of the Act and rule 17d–1 under the Act generally prohibit an affiliated person of a registered investment company, or any affiliated person of such a person, when acting as principal, from effecting any joint transaction in which the investment company participates, unless, upon application, the transaction has been approved by the Commission. Rule 17d–1(b) under the Act provides that in passing upon an application filed under the rule, the Commission will consider whether the participation of the registered investment company in a joint enterprise, joint arrangement or profit sharing plan on the basis proposed is consistent with the provisions, policies and purposes of the Act and the extent to which such participation is on a basis different from or less advantageous than that of the other participants.

9. Applicants assert that the purpose of section 17(d) is to avoid overreaching by and an unfair advantage to insiders. Applicants assert that the InterFund Program is consistent with the provisions, policies and purposes of the Act in that it offers both reduced borrowing costs and enhanced returns on loaned funds to all participating Funds and their shareholders. Applicants note that each Fund would have an equal opportunity to borrow and lend on equal terms consistent with its investment policies and fundamental investment limitations. Applicants assert that each Fund's participation in the proposed InterFund Program would be on terms that are no different from or less advantageous than that of other participating Funds.

Applicants' Conditions

Applicants agree that any order granting the requested relief will be subject to the following conditions:

1. The Interfund Loan Rate will be the average of the Repo Rate and the Bank Loan Rate.

2. On each business day, when an interfund loan is to be made, the InterFund Program Team will compare the Bank Loan Rate with the Repo Rate and will make cash available for Interfund Loans only if the Interfund Loan Rate is: (a) More favorable to the lending Fund than the Repo Rate; and (b) more favorable to the borrowing Fund than the Bank Loan Rate.

3. If a Fund has outstanding Bank Borrowings, any Interfund Loan to the Fund will: (a) Be at an interest rate equal to or lower than the interest rate of any outstanding bank loan; (b) be secured at least on an equal priority basis with at least an equivalent percentage of collateral to loan value as any outstanding bank loan that requires collateral; (c) have a maturity no longer than any outstanding bank loan (and in any event not over seven days); and (d) provide that, if an event of default occurs under any agreement evidencing an outstanding bank loan to the Fund, that event of default by the Fund, will automatically (without need for action or notice by the lending Fund) constitute an immediate event of default under the interfund lending agreement which both (i) entitles the lending Fund to call the Interfund Loan immediately and exercise all rights with respect to any collateral and (ii) causes the call to be made if the lending bank exercises its right to call its loan under its agreement with the borrowing Fund.

4. A Fund may borrow on an unsecured basis through the InterFund Program only if the relevant borrowing Fund's outstanding borrowings from all sources immediately after the interfund borrowing total 10% or less of its total assets, provided that if the borrowing Fund has a secured loan outstanding from any other lender, including but not limited to another Fund, the lending Fund's Interfund Loan will be secured on at least an equal priority basis with at least an equivalent percentage of collateral to loan value as any outstanding loan that requires collateral. If a borrowing Fund's total outstanding borrowings immediately after an Interfund Loan would be greater than 10% of its total assets, the Fund may borrow through the InterFund Program only on a secured basis. A Fund may not borrow through the InterFund Program or from any other source if its total outstanding borrowings immediately after the borrowing would be more than 33⅓% of its total assets or any lower threshold provided for by a Fund's fundamental restriction or non-fundamental policy.

5. Before any Fund that has outstanding interfund borrowings may, through additional borrowings, cause its outstanding borrowings from all sources to exceed 10% of its total assets, it must first secure each outstanding Interfund Loan to a Fund by the pledge of segregated collateral with a market value at least equal to 102% of the outstanding principal value of the loan. If the total outstanding borrowings of a Fund with outstanding Interfund Loans exceed 10% of its total assets for any other reason (such as a decline in net asset value or because of shareholder redemptions), the Fund will within one business day thereafter either: (a) Repay all its outstanding Interfund Loans to other Funds; (b) reduce its outstanding indebtedness to other Funds to 10% or less of its total assets; or (c) secure each outstanding Interfund Loan to other Funds by the pledge of segregated collateral with a market value at least equal to 102% of the outstanding principal value of the loan until the Fund's total outstanding borrowings cease to exceed 10% of its total assets, at which time the collateral called for by this condition 5 shall no longer be required. Until each Interfund Loan that is outstanding at any time that a Fund's total outstanding borrowings exceed 10% of its total assets is repaid or the Fund's total outstanding borrowings cease to exceed 10% of its total assets, the Fund will mark the value of the collateral to market each day and will pledge such additional collateral as is necessary to maintain the market value of the collateral that secures each outstanding Interfund Loan to Funds at least equal to 102% of the outstanding principal value of the Interfund Loans.

6. No Fund may lend to another Fund through the InterFund Program if the loan would cause the lending Fund's aggregate outstanding loans through the InterFund Program to exceed 15% of its current net assets at the time of the loan.

7. A Fund's Interfund Loans to any one Fund shall not exceed 5% of the lending Fund's net assets.

8. The duration of Interfund Loans will be limited to the time required to receive payment for securities sold, but in no event more than seven days. Loans effected within seven days of each other will be treated as separate loan transactions for purposes of this condition.

9. A Fund's borrowings through the InterFund Program, as measured on the day when the most recent loan was made, will not exceed the greater of 125% of the Fund's total net cash redemptions for the preceding seven calendar days or 102% of a Fund's sales fails for the preceding seven calendar days.

10. Each Interfund Loan may be called on one business day's notice by a lending Fund and may be repaid on any day by a borrowing Fund.

11. A Fund's participation in the InterFund Program must be consistent with its investment restrictions, policies, limitations and organizational documents.

12. The InterFund Program Team will calculate total Fund borrowing and lending demand through the InterFund Program, and allocate Interfund Loans on an equitable basis among the Funds, without the intervention of any portfolio manager. The InterFund Program Team will not solicit cash for the InterFund Program from any Fund or prospectively publish or disseminate loan demand data to portfolio managers. The InterFund Program Team will invest all amounts remaining after satisfaction of borrowing demand in accordance with the standing instructions of the relevant portfolio manager or such remaining amounts will be invested directly by the portfolio managers of the Funds.

13. The InterFund Program Team will monitor the Interfund Loan Rate charged and the other terms and conditions of the Interfund Loans and will make a quarterly report to the Boards concerning the participation of the Funds in the InterFund Program and the terms and other conditions of any extensions of credit under the InterFund Program.

14. Each Board, including a majority of its Independent Board Members, will:

(a) Review, no less frequently than quarterly, the participation of each Fund it oversees in the InterFund Program during the preceding quarter for compliance with the conditions of any order permitting such participation;

(b) establish the Bank Loan Rate formula used to determine the interest rate on Interfund Loans;

(c) review, no less frequently than annually, the continuing appropriateness of the Bank Loan Rate formula; and

(d) review, no less frequently than annually, the continuing appropriateness of the participation in the InterFund Program by each Fund it oversees.

15. Each Fund will maintain and preserve for a period of not less than six years from the end of the fiscal year in which any transaction by it under the InterFund Program occurred, the first two years in an easily accessible place, written records of all such transactions setting forth a description of the terms of the transaction, including the amount, the maturity and the Interfund Loan Rate, the rate of interest available at the time each Interfund Loan is made on overnight repurchase agreements and Bank Borrowings, and such other information presented to the Boards of the Funds in connection with the review required by conditions 13 and 14.

16. In the event an Interfund Loan is not paid according to its terms and the default is not cured within two business days from its maturity or from the time the lending Fund makes a demand for payment under the provisions of the interfund lending agreement, the Adviser to the lending Fund promptly will refer the loan for arbitration to an independent arbitrator selected by the Board of any Fund involved in the loan who will serve as arbitrator of disputes concerning Interfund Loans.[3] The arbitrator will resolve any problem promptly, and the arbitrator's decision will be binding on both Funds. The arbitrator will submit, at least annually, a written report to the Board of each Fund setting forth a description of the nature of any dispute and the actions taken by the Funds to resolve the dispute.

17. The Advisers will prepare and submit to the Board for review an initial report describing the operations of the InterFund Program and the procedures to be implemented to ensure that all Funds are treated fairly. After the commencement of the InterFund Program, the Advisers will report on the operations of the InterFund Program at each Board's quarterly meetings. Each Fund's chief compliance officer, as defined in rule 38a–1(a)(4) under the Act, shall prepare an annual report for its Board each year that the Fund participates in the InterFund Program, that evaluates the Fund's compliance with the terms and conditions of the application and the procedures established to achieve such compliance. Each Fund's chief compliance officer will also annually file a certification pursuant to Item 77Q3 of Form N–SAR as such form may be revised, amended or superseded from time to time, for each year that the Fund participates in the InterFund Program, that certifies that the Fund and its Adviser have implemented procedures reasonably designed to achieve compliance with the terms and conditions of the order. In particular, such certification will address procedures designed to achieve the following objectives:

(a) That the Interfund Loan Rate will be higher than the Repo Rate but lower than the Bank Loan Rate;

(b) compliance with the collateral requirements as set forth in the application;

(c) compliance with the percentage limitations on interfund borrowing and lending;

(d) allocation of interfund borrowing and lending demand in an equitable manner and in accordance with procedures established by the Board; and

(e) that the Interfund Loan Rate does not exceed the interest rate on any third party borrowings of a borrowing Fund at the time of the Interfund Loan.

Additionally, each Fund's independent registered public accountants, in connection with their audit examination of the Fund, will review the operation of the InterFund Program for compliance with the conditions of the application and their review will form the basis, in part, of the auditor's report on internal accounting controls in Form N–SAR.

18. No Fund will participate in the InterFund Program, upon receipt of requisite regulatory approval, unless it has fully disclosed in its registration statement on Form N–1A (or any successor form adopted by the Commission) all material facts about its intended participation.

For the Commission, by the Division of Investment Management, under delegated authority.

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11534 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77808; File No. SR–NYSEMKT–2016–51]

Self-Regulatory Organizations; NYSE MKT LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend Rule 98—Equities

May 11, 2016.

Pursuant to Section 19(b)(1)[1] of the Securities Exchange Act of 1934 (the

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[3] If the dispute involves Funds that do not have a common Board, the Board of each affected Fund will select an independent arbitrator that is satisfactory to each Fund.

[1] 15 U.S.C. 78s(b)(1).

"Act")[2] and Rule 19b–4 thereunder,[3] notice is hereby given that on May 2, 2016, NYSE MKT LLC (the "Exchange" or "NYSE MKT") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I and II, below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend Rule 98—Equities to provide that when Designated Market Makers ("DMM") enter interest for the purpose of facilitating the execution of customer orders, such orders would not be required to be designated as DMM interest. The proposed rule change is available on the Exchange's Web site at *www.nyse.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend Rule 98—Equities ("Rule 98") to provide that when DMMs enter interest on a proprietary basis for the purpose of facilitating the execution of customer orders, such orders would not be required to be designated as DMM interest.[4] This proposed rule change is based on a recently approved amendment to New York Stock Exchange LLC ("NYSE") Rule 98.[5]

Background

In 2014, the Exchange amended Rule 98 to adopt a principles-based approach to prohibit the misuse of material nonpublic information by a member organization that operates a DMM unit and make conforming changes to other Exchange rules.[6] Those rule changes provide member organizations operating DMM units with the ability to integrate DMM unit trading with other trading units, while maintaining tailored restrictions to address that DMMs while on the Trading Floor may have access to certain Floor-based non-public information. By removing prescriptive restrictions, the 2014 Filing was designed to enable a member organization that engages in market-making operations on multiple exchanges to house its DMM operations together with the other market-making operations, even if such operations are customer-facing, or, to enable a member organization to consolidate all equity trading, including customer-facing operations and the DMM unit, within a single independent trading unit.

Rule 98(c) sets forth specified restrictions to operating a DMM unit.[7] Among other requirements, Rule 98(c)(4) provides that any interest entered into Exchange systems by the DMM unit in DMM securities[8] must be identifiable as DMM unit interest. Current Rule 98(c)(4) was designed to ensure that all trading activity by a DMM unit in DMM securities at the Exchange is available for review. As discussed below, under Rule 98(c)(5), DMMs would continue to be required to submit information to the Exchange to make available to the Exchange for review all trading activity by a DMM unit in DMM securities. The Exchange did not specify which system(s) a DMM unit must use because, as the Exchange's trading systems continue to evolve, the manner by which interest would be identified as DMM interest could change. Accordingly, the current rule requires any trading for the account of the DMM unit in DMM securities at the Exchange to be identifiable as DMM interest.

Rule 98(c)(5) provides that a member organization must provide the Exchange with real-time net position information for trading in DMM securities by the DMM unit and any independent trading unit of which it is a part, at such times and in the manner prescribed by the Exchange. Rule 98(d) further specifies that the DMM rules[9] will apply only to a DMM unit's quoting or trading in its DMM securities for its own accounts at the Exchange. Accordingly, the DMM rules do not apply to any customer orders that a member organization that operates a DMM unit sends to the Exchange as agent.[10]

Because Rule 98(c)(4) currently requires that any interest entered into Exchange systems by the DMM unit in DMM securities be identifiable as DMM interest, a DMM unit integrated with a customer-facing unit that would send customer orders in DMM securities to the Exchange as proprietary interest must identify it as DMM interest. As a result, although agency orders are not subject to DMM rules, customer-driven interest entered on a proprietary basis is subject to all DMM rules.

To date, none of the member organizations operating a DMM have integrated a DMM unit with a customer-facing trading unit and the Exchange believes that the current rule requiring customer-driven orders that are represented on a proprietary basis be designated as DMM interest has served as a barrier to achieving such integration.[11] Specifically, there are certain scenarios when the rules governing DMMs may conflict with a member organization's obligations to its customers. For example, DMMs are not permitted to enter Market Orders, MOO Orders, CO Orders, MOC Order, LOC Orders, or orders with Sell "Plus"—Buy "Minus" Instructions.[12] But to meet customer instructions, a customer-driven order entered by a member organization on a proprietary basis may need to be one of these order types. As another example, DMMs are restricted from engaging in specified trading in the last ten minutes of trading before the close of trading.[13] But a member organization may have a best execution obligation to route a customer-driven order to the Exchange in the last ten minutes of trading.

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[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] As defined in Rule 2(i)—Equities, the term "DMM" means an individual member, officer, partner, employee or associated person of a Designated Market Maker Unit who is approved by the Exchange to act in the capacity of a DMM.

[5] *See* Securities Exchange Act Release No. 77708 (April 26, 2016) (SR–NYSE–2016–16) (NYSE Rule 98 Approval Order).

[6] *See* Securities Exchange Act Release Nos. 72535 (July 3, 2014), 79 FR 39024 (July 9, 2014) (Approval Order) and 71838 (April 1, 2014), 79 FR 19131 (April 7, 2014) ("2014 Notice") (SR–NYSEMKT–2014–22) ("2014 Filing").

[7] As defined in Rule 98(b)(1), the term "DMM unit" means a trading unit within a member organization that is approved pursuant to Rule 103—Equities to act as a DMM unit.

[8] As defined in Rule 98(b)(2), the term "DMM securities" means any securities allocated to the DMM unit pursuant to Rule 103B—Equities or other applicable rules.

[9] As defined in Rule 98(b)(3), the term "DMM rules" means any rules that govern DMM or DMM unit conduct or trading.

[10] *See* 2014 Notice, *supra* note 5 [sic] at 19137 (specifying that Rule 98(d) was added because DMM rules are not applicable to any customer orders routed to the Exchange by a member organization as agent).

[11] The Exchange understands it is a common practice among market makers that operate as wholesalers, and thus have their own customer orders as well as retail order flow from another broker dealer, to facilitate the execution of customer order flow by representing it on a proprietary basis when such orders are routed to an exchange. Once a customer-driven order that has been represented on a proprietary basis on an exchange has been executed, the market maker uses the position acquired on the Exchange to fill the customer order either on a riskless-principal basis or with price improvement to the customer.

[12] *See* Rule 104(b)(vi)—Equities.

Proposed Amendments

The Exchange proposes to amend Rule 98 to better reflect how member organizations that integrate DMM unit operations with customer-facing operations may facilitate customer-driven order flow to the Exchange in DMM securities. As noted above, one of the intended goals of the 2014 Filing was to permit member organizations to integrate DMM unit operations with other market-making operations, including customer-facing units. However, as discussed above, subjecting customer order flow that is entered on a proprietary basis to DMM rules may be inconsistent with a member organization's obligations to its customers, and thus continue to serve as a barrier to integrating DMM units within a member organization. Accordingly, the Exchange proposes to amend Rule 98 to facilitate better integration of DMM units with a member organization's existing customer-facing market-making trading units by specifying that, as with agency orders, customer-driven orders that are entered on a proprietary basis by the DMM unit would not be required to be designated as DMM interest.

The Exchange proposes to amend Rule 98 to provide that proprietary interest that is entered by a DMM unit for the purposes of facilitating customer orders would not be required to be designated as DMM interest. The Exchange proposes to replace the phrase "any interest" with the phrase "proprietary interest" in Rule 98(c)(4) to clarify that the existing rule only governs proprietary interest of a DMM unit, *i.e.*, interest for the account of the member organization. As further proposed, the Exchange would amend Rule 98(c)(4) to provide that proprietary interest entered into Exchange systems by the DMM unit in DMM securities would not be required to be identifiable as DMM unit interest if such interest is (1) on a riskless principal basis, or on a principal basis to provide price improvement to the customer, and (2) for the purposes of facilitating the execution of an order received from a customer (whether its own customer or the customer of another broker-dealer). The Exchange proposes to define such interest as a "customer-driven order."

The proposed definition of "customer-driven order" is not a novel concept in that other SROs rules define the concept of a proprietary order being entered to facilitate a customer order. For example, Supplementary Material .03 to FINRA Rule 5320 defines the term "facilitated order" to mean a proprietary trade that is for the purposes of facilitating the execution, on a riskless principal basis, of an order from a customer (whether its own customer or another broker-dealer).[14] The Exchange proposes a distinction for the definition of "customer-driven order" in Rule 98 as compared to the Rule 5320 definition of "facilitated order" because, as proposed, a customer-driven order could be entered, not only on a riskless principal basis, but also on a principal basis so the member organization could provide price improvement to the customer. In either case, the member organization entering the customer-driven order would need to have received a customer order before entering a customer-driven order at the Exchange.[15]

The proposed rule change is designed to reflect how member organizations handle customer orders, which in many circumstances, are routed to an exchange on a proprietary basis to facilitate execution of a customer's order. Therefore, the Exchange believes that the proposed amendment is consistent with the current rule, which does not require agency orders entered by the member organization that operates a DMM unit to be subject to DMM rules.[16]

The Exchange further proposes to amend Rule 98(c)(4) to specify that a DMM unit must use unique mnemonics that identify to the Exchange its customer-driven orders in DMM securities. Such mnemonics may not be used for trading activity at the Exchange in DMM securities that are not customer-driven orders, but may be used for trading activities in securities not assigned to the DMM. The Exchange believes that requiring a separate mnemonic for customer-driven orders would assist the Exchange in monitoring DMM unit compliance with the proposed rule.[17]

The Exchange further proposes to amend Rule 98(d) to specify which rules would be applicable to trading by the DMM unit. As proposed, the rules, fees, or credits applicable to DMM quoting or trading activity would apply only to a DMM unit's quoting or trading in its DMM securities for its own account at the Exchange that has been identified as DMM interest. In addition, consistent with the proposal that customer-driven orders would not be required to be designated as DMM interest, the Exchange proposes to add text to Rule 98(d) to state that customer-driven orders for the account of a DMM unit that have not been identified as DMM interest would not be subject to DMM rules or be eligible for any fees or credits applicable to DMM quoting or trading activity.[18] In addition, such customer-driven orders could not be aggregated with interest that has been identified as DMM interest for purposes of any DMM-related fees or credits or DMM quoting obligations specified in Rule 104(a). This proposed rule text would provide that customer-driven orders not designated as DMM interest would not be subject to DMM rules, which, as described above, include restrictions on availability of certain order types and entry of specified orders during the last ten minutes of trading. Because a customer-driven order that has not been designated as DMM interest would not be subject to DMM rules, it would also not be eligible for a parity allocation applicable for DMMs pursuant to Rule 72(c) or be used to assist a DMM in meeting its quoting or market maintenance obligations, or be eligible for DMM fees or credits.

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[13] *See* Rule 104(g)(i)(A)(III)—Equities (defining Prohibited Transactions). Specifically, a DMM with a long position in a security is prohibited from making a purchase in a security that results in a new high price on the Exchange for the day, and a DMM with a short position in a security is prohibited from making a sale in such security that results in a new low price for the day.

[14] *See also* Supplementary Material .03 to Rule 5320—Equities.

[15] If a customer-driven order, as defined in Rule 98(c)(4), is not handled on a riskless principal basis, it would not be eligible for the riskless principal exception to the prohibition against trading ahead of customer orders as specified in Rule 5320—Equities.

[16] *See supra* note 10.

[17] The Exchange requires a member to use a different mnemonic for its SLP-Prop trading activity in assigned SLP securities than it uses for such member's trading in assigned SLP securities that is not SLP-Prop trading. Using different mnemonics allows the Exchange to identify SLP-Prop trading activity in a member organization's assigned SLP securities. A member organization may use the same mnemonic for its trading activity in securities not assigned to an SLP as it uses for its SLP-Prop trading in assigned SLP securities. *See* Rule 107B(c)(2)—Equities.

[18] Customer-driven orders would be eligible for any fees or credits applicable to equity transactions at the Exchange that are not DMM or Floor broker trades. *See* NYSE MKT Equities Price List, available here: *https://www.nyse.com/publicdocs/nyse/markets/nyse-mkt/NYSE_MKT_Equities_Price_List.pdf.*

The Rule 98(c)(5) obligation to provide the Exchange with real-time net position information in DMM securities would continue to be applicable to the DMM unit's position in DMM securities together with any position of a Regulation SHO independent trading unit of which the DMM unit may be included, regardless of whether they are positions resulting from trades in away markets, trades as a result of DMM interest entered at the Exchange, or customer-driven orders routed to the Exchange that were not identified as DMM interest.[19] For example, if a DMM unit is combined with market-making desks that are trading on away markets and that route customer-driven orders to the Exchange in DMM securities that are not identified as DMM interest, the member organization would be required to report the position of the entire DMM unit in DMM securities, not only the DMM's Exchange-traded positions resulting from DMM interest. The Exchange also proposes a non-substantive amendment to Rule 98(c)(5) to delete the term "for trading," which the Exchange believes is extraneous rule text.

2. Statutory Basis

The basis under the Act for this proposed rule change is the requirement under Section 6(b)(5)[20] that an Exchange have rules that are designed to promote the just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system and, in general, to protect investors and the public interest. The Exchange believes that the proposed rule change would remove impediments to and perfect the mechanism of a free and open market by providing greater specificity in Rule 98 regarding which proprietary interest would be required to be entered as DMM interest.

The Exchange believes that the proposed amendment to define the term "customer-driven order" to be proprietary interest of a DMM that is for the purposes of facilitating the execution of an order received from a customer (whether its own customer or the customer of another broker-dealer) on a riskless principal basis or on a principal basis to provide price improvement to the customer reflects the current reality of how broker-dealers facilitate customer orders that are routed to an exchange. Specifically, after receiving a customer order, such customer order is routed to an exchange on a proprietary basis, and once an execution is received from an exchange, the execution is provided to the customer either on a riskless principal basis or with price improvement. Facilitating customer orders on a proprietary basis is not a novel concept and serves as the basis of the definition of the term "facilitated order" in Supplementary Material .03 to FINRA Rule 5320. While the Exchange proposes that customer-driven orders for the purposes of Rule 98 would not be required to be executed only on a riskless principal basis, but could also be executed on a principal basis to provide price improvement to the customer, this difference does not alter the premise of how member organizations facilitate customer orders, as already established in Rule 5320.03. Because the proposed definition is narrowly defined to reflect how customer orders are facilitated on a proprietary basis when routed to an exchange, the Exchange believes that the proposed amendment to Rule 98(c)(4) to define the term "customer-driven order" would remove impediments to and perfect the mechanism of a free and open market.

The Exchange believes that requiring a DMM unit to use unique mnemonics to identify customer-driven orders in DMM securities would promote just and equitable principles of trade because requiring such orders to be entered using unique mnemonics would assist the Exchange in monitoring DMM unit compliance with the proposed rule.

The Exchange further believes that providing DMM units with a choice of whether to designate a customer-driven order as DMM interest would remove impediments to and perfect the mechanism of a free and open market because certain DMM rules may conflict with a broker-dealer's obligation to its customers. As discussed in the 2014 Filing, agency orders entered by a member organization that operates a DMM unit are not subject to DMM rules.[21] Yet, if that same customer order were routed to the Exchange on a proprietary basis, which is the manner by which broker-dealers may handle customer order flow, it would be subject to DMM rules. Accordingly, because Rule 98 does not currently require agency flow to be subject to DMM rules, the Exchange believes it is consistent with the protection of investors and the public interest that agency flow that is facilitated by a member organization on a proprietary basis at the Exchange would similarly not be required to be subject to DMM rules.

The proposed rule change would further be consistent with the protection of investors and the public interest because it would enable customer-driven orders to not be subject to DMM rules and eliminate any conflict with customer instructions or best execution obligations. The Exchange notes that this proposed rule change would not alter in any way a member organization's existing obligations under Section 15(g) of the Act,[22] Regulation SHO,[23] Rule 5320, or to maintain policies and procedures to assure that a member organization does not engage in any frontrunning of customer order information in violation of Exchange, FINRA, or federal securities laws.

The Exchange further believes that the proposed amendments to Rule 98(d) would remove impediments to and perfect the mechanism of a free and open market by promoting transparency in Exchange rules regarding which rules, fees or credits applicable to DMM quoting or trading activity would be applicable to which interest. More specifically, the Exchange believes that it would remove impediments to and perfect the mechanism of a free and open market to provide specificity in Exchange rules that customer-driven orders that have not been designated as DMM interest would not be subject to the DMM rules and also would not be eligible for DMM fees or credits or to be aggregated with DMM interest for purposes of any DMM-related fees or credits or DMM quoting obligations.

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[19] Under Regulation SHO, determination of a seller's net position is based on the seller's position in the security in all of its accounts, absent aggregation unit treatment under Rule 200(f) of Regulation SHO. *See* Securities Exchange Act Release No. 50103 (July 28, 2004), 69 FR 48008, 48010, n.22 (Aug. 6, 2004); *see also* Securities Exchange Act Release No. 48709 (Oct. 29, 2003), 68 FR 62972, 62991 and 62994 (Nov. 6, 2003); Letter from Richard R. Lindsey, Director, Division of Market Regulation, to Roger D. Blanc, Wilkie Farr & Gallagher, SEC No-Action Letter, 1998 SEC No-Act. LEXIS 1038, p. 5 (Nov. 23, 1998); Securities Exchange Act Release No. 30772 (June 3, 1992), 57 FR 24415, 24419 n.47 (June 9, 1992); Securities Exchange Act Release No. 27938 (Apr. 23, 1990), 55 FR 17949, 17950 (Apr. 30, 1990). The Commission adopted a narrow exception to Regulation SHO's "locate" requirement only for market makers engaged in bona-fide market making in the security at the time they effect the short sale. *See* 17 CFR 242.203(b)(2)(iii); *see also* Securities Exchange Act Release No. 50103 (July 28, 2004), 69 FR 48008, 48015 (Aug. 6, 2004); Securities Exchange Act Release No. 58775 (Oct. 14, 2008), 73 FR 61690, 61698–9 (Oct. 17, 2008). Broker-dealers would not be able to rely on the Exchange's or any self-regulatory organization's designation of market marking for eligibility for the bona-fide market making exception to the "locate" requirement, as such designations are distinct and independent from Regulation SHO. Further, the Exchange's designation of proprietary interest or any exclusion from proprietary interest for purposes of NYSE rules is not relevant for purposes of Regulation SHO. Eligibility for the bona-fide market making exception depends on the facts and circumstances and a determination of bona-fide market making is based on the Commission's factors outlined in the aforementioned Regulation SHO releases. It should also be noted that a determination of bona-fide market making is relevant for the purposes of the close-out obligations under Rule 204 of Regulation SHO. *See* 17 CFR 242.204(a)(3).

[20] 15 U.S.C. 78f(b)(5).

[21] *See supra* note 10.

[22] 15 U.S.C. 78o(g).

[23] 17 CFR 242.201.

Finally, the Exchange believes that the proposed amendment to Rule 98(c)(5) would remove impediments to and perfect the mechanism of a free and open market by removing extraneous rule text, thus promoting simplicity in Exchange rules.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The proposed rule change is designed to be pro-competitive because it would remove a restriction unique to DMMs as specified in Rule 98, thus enabling existing customer-facing market making units to operate as a DMM unit at the Exchange without needing to change the manner by which they may facilitate customer orders on a proprietary basis at an exchange. The proposed rule change would also harmonize the Exchange's rules with recently approved amendments to NYSE Rule 98.[24]

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The Exchange has filed the proposed rule change pursuant to Section 19(b)(3)(A) of the Act[25] and Rule 19b–4(f)(6) thereunder.[26] Because the proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative prior to 30 days from the date on which it was filed, or such shorter time as the Commission may designate, if consistent with the protection of investors and the public interest, the proposed rule change has become effective pursuant to Section 19(b)(3)(A) of the Act and Rule 19b–4(f)(6)(iii) thereunder.

A proposed rule change filed under Rule 19b–4(f)(6)[27] normally does not become operative prior to 30 days after the date of the filing. However, pursuant to Rule 19b4(f)(6)(iii),[28] the Commission may designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Exchange notes that the merits of the proposed rule change have already been considered by the Commission in the context of a substantively identical filing by the NYSE, which the Commission approved.[29] The Exchange also believes that waiver is appropriate so that DMM units that are registered in both Exchange-listed and NYSE-listed securities will again, without delay, be subject to consistent rules across the two exchanges. The Commission believes that the proposed rule change is consistent with the protection of investors and the public interest, because the proposal is substantively identical to the NYSE proposal that was recently approved by the Commission, and because waiver of the operative delay will provide for consistent rules between NYSE and the Exchange. Accordingly, the Commission hereby waives the 30-day operative delay and designates the proposal operative upon filing.[30]

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[31] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSEMKT–2016–51 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEMKT–2016–51. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEMKT–2016–51 and should be submitted on or before June 7, 2016.

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[24] *See* NYSE Rule 98 Approval Order, *supra* note 5.

[25] 15 U.S.C. 78s(b)(3)(A).

[26] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6)(iii) requires the Exchange to give the Commission written notice of the Exchange's intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[27] 17 CFR 240.19b–4(f)(6).

[28] 17 CFR 240.19b–4(f)(6)(iii).

[29] *See* NYSE Rule 98 Approval Order, *supra* note 5.

[30] For purposes only of accelerating the operative date of this proposal, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. 15 U.S.C. 78c(f).

[31] 15 U.S.C. 78s(b)(2)(B).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[32]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11538 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

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[32] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77812; File No. SR–NYSE–2016–34]

Self-Regulatory Organizations; New York Stock Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Amending Its Price List To Make a Clarifying Change Regarding the Rebate Program Recently Implemented by the Exchange for the NYSE Bonds System

May 11, 2016.

Pursuant to Section 19(b)(1)[1] of the Securities Exchange Act of 1934 (the "Act")[2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on May 3, 2016, New York Stock Exchange LLC ("NYSE" or the "Exchange") filed with the Securities and Exchange Commission (the "Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend its Price List to make a clarifying change regarding the rebate program recently implemented by the Exchange for the NYSE Bonds℠ system. The proposed rule change is available on the Exchange's Web site at *www.nyse.com*, at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Price List to make a clarifying change regarding the rebate program recently implemented by the Exchange for the NYSE Bonds system.[4] The purpose of this proposed rule change is to clarify the application of the rebate program only. The Exchange is not proposing to change in any way the manner in which the rebate program operates.

Pursuant to the Liquidity Provider Incentive Program, a voluntary rebate program, the Exchange pays Users[5] of NYSE Bonds a monthly rebate provided Users who opt into the rebate program meet specified quoting requirements. Under the program, the rebate payable is based on the number of CUSIPs[6] a User quotes.

The rebate amount is tiered based on the number of CUSIPs quoted by a User, as follows:

LIQUIDITY PROVIDER INCENTIVE PROGRAM

Number of CUSIPs	Monthly rebate
400–599	$10,000
600–799	20,000
800 or more	30,000

To qualify for a rebate, a User is required to provide continuous two-sided quotes for at least eighty percent (80%) of the time during the Core Bond Trading Session for an entire calendar month.[7] The Exchange calculates each participating User's quoting performance beginning each month on a daily basis, up to and including the last trading day of a calendar month, to determine at the end of each month each User's monthly average. Under the program, Users must provide a two-sided quote for a minimum of hundred (100) bonds per side of the market with an average spread of half-point ($0.50) or less in CUSIPs whose average maturity is at least five (5) years as of the date the User provides a quote. The Exchange proposes to make a clarifying change to the rule text to note that in order for a CUSIP to qualify for inclusion in the rebate calculation, a User must provide continuous two-sided quotes in a CUSIP, whether it's for eighty percent (80%) or fifty percent (50%) of the time, as applicable, for a minimum of hundred (100) bonds per side of the market that has an average spread of half-point ($0.50) or less and whose average maturity is at least five (5) years as of the date the User provides the quote.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,[8] in general, and furthers the objectives of Sections 6(b)(4) and 6(b)(5) of the Act,[9] in particular, because it provides for the equitable allocation of reasonable dues, fees, and other charges among its members, issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers. The Exchange believes that the clarifying change to the current rule text is reasonable as it will clarify the application of the rebate program and will help to avoid confusion for Users that opt into the rebate program. The Exchange notes that the proposed change is not designed to amend any rebate, nor alter the manner in which it calculates rebates under the program. The Exchange believes the proposed amendment is intended to make the Price List clearer and less confusing for investors and eliminate potential investor confusion, thereby removing impediments to and perfecting the mechanism of a free and open market and a national market system, and, in general, protecting investors and the public interest.

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[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] *See* Securities Exchange Act Release No. 77591 (April 12, 2016), 81 FR 22656 (April 18, 2016) (SR–NYSE–2016–26).

[5] Rule 86(b)(2)(M) defines a User as any Member or Member Organization, Sponsored Participant, or Authorized Trader that is authorized to access NYSE Bonds.

[6] CUSIP stands for Committee on Uniform Securities Identification Procedures. A CUSIP number identifies most financial instruments, including: stocks of all registered U.S. and Canadian companies, commercial paper, and U.S. government and municipal bonds. The CUSIP system—owned by the American Bankers Association and managed by Standard & Poor's—facilitates the clearance and settlement process of securities. *See http://www.sec.gov/answers/cusip.htm.*

[7] For the first calendar month after a User opts in, the User is required to provide continuous two-sided quotes for fifty percent (50%) of the time during the Core Bond Trading Session.

[8] 15 U.S.C. 78f(b).

[9] 15 U.S.C. 78f(b)(4), (5).

B. Self-Regulatory Organization's Statement on Burden on Competition

In accordance with Section 6(b)(8) of the Act,[10] the Exchange believes that the proposed rule change would not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange is proposing to make a clarifying change to the Price List that would not have any impact on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[11] and Rule 19b–4(f)(6) thereunder.[12]

A proposed rule change filed pursuant to Rule 19b–4(f)(6) normally does not become operative for 30 days after the date of its filing. However, pursuant to Rule 19b–4(f)(6)(iii), the Commission may designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Commission believes that waiving the 30-day operative delay is consistent with the protection of investors and the public interest as it will allow the Exchange to clarify the application of its rebate program and therefore reduce confusion in the application of the Exchange's Price List. Therefore, the Commission hereby waives the operative delay and designates the proposed rule change operative upon filing.[13]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSE–2016–34 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSE–2016–34. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSE–2016–34, and should be submitted on or before June 7, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[14]

Robert W. Errett,

Deputy Secretary.

[FR Doc. 2016–11542 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #14708 and #14709]

Texas Disaster Number TX–00468

AGENCY: U.S. Small Business Administration.

ACTION: Amendment 2.

SUMMARY: This is an amendment of the Presidential declaration of a major disaster for the State of Texas (FEMA–4269–DR), dated 04/25/2016.

Incident: Severe Storms and Flooding.

Incident Period: 04/17/2016 through 04/24/2016.

Effective Date: 05/09/2016.

Physical Loan Application Deadline Date: 06/24/2016.

EIDL Loan Application Deadline Date: 01/25/2017.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: The notice of the Presidential disaster declaration for the State of Texas, dated 04/25/2016 is hereby amended to include the following areas as adversely affected by the disaster:

Primary Counties: (Physical Damage and Economic Injury Loans):
Fort Bend, Liberty, Montgomery, San Jacinto
Contiguous Counties: (Economic Injury Loans Only):

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[10] 15 U.S.C. 78f(b)(8).

[11] 15 U.S.C. 78s(b)(3)(A).

[12] 17 CFR 240.19b–4(f)(6). In addition, Rule 19b–4(f)(6)(iii) requires the Exchange to give the Commission written notice of the Exchange's intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[13] For purposes only of waiving the 30-day operative delay, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[14] 17 CFR 200.30–3(a)(12).

Texas: Hardin, Jefferson, Polk, Trinity

All other information in the original declaration remains unchanged.

(Catalog of Federal Domestic Assistance Number 59008)

James E. Rivera,
Associate Administrator for Disaster Assistance.

[FR Doc. 2016–11615 Filed 5–16–16; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #14719 and #14720]

New York Disaster #NY–00167

AGENCY: U.S. Small Business Administration.

ACTION: Notice.

SUMMARY: This is a notice of an Administrative declaration of a disaster for the State of New York dated 05/10/2016.

Incident: Multiple Apartment Buildings Fire.

Incident Period: 03/29/2016.

Effective Date: 05/10/2016.

Physical Loan Application Deadline Date: 07/11/2016.

Economic Injury (EIDL) Loan Application Deadline Date: 02/10/2017.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the Administrator's disaster declaration, applications for disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties: Kings
Contiguous Counties:
New York: New York, Queens, Richmond

The Interest Rates are:

	Percent
For Physical Damage:	
Homeowners With Credit Available Elsewhere	3.625
Homeowners Without Credit Available Elsewhere	1.813
Businesses With Credit Available Elsewhere	6.250
Businesses Without Credit Available Elsewhere	4.000
Non-Profit Organizations With Credit Available Elsewhere	2.625
Non-Profit Organizations Without Credit Available Elsewhere	2.625
For Economic Injury:	
Businesses & Small Agricultural Cooperatives Without Credit Available Elsewhere	4.000
Non-Profit Organizations Without Credit Available Elsewhere	2.625

The number assigned to this disaster for physical damage is 14719 5 and for economic injury is 14720 0.

The State which received an EIDL Declaration # is New York.

(Catalog of Federal Domestic Assistance Numbers 59008)

Maria Contreras-Sweet,
Administrator.

[FR Doc. 2016–11604 Filed 5–16–16; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #14716]

IDAHO Disaster #ID–00062 Declaration of Economic Injury

AGENCY: U.S. Small Business Administration.

ACTION: Notice.

SUMMARY: This is a notice of an Economic Injury Disaster Loan (EIDL) declaration for the State of IDAHO, dated 05/09/2016.

Incident: Landslide and State Highway 14 Closure.

Incident Period: 02/18/2016 and continuing.

DATES: *Effective Date:* 05/09/2016.

EIDL Loan Application Deadline Date: 02/09/2017.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the Administrator's EIDL declaration, applications for economic injury disaster loans may be filed at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties: Idaho
Contiguous Counties:
Idaho: Adams, Clearwater, Lemhi, Lewis, Nez Perce, Valley
Montana: Missoula, Ravalli
Oregon: Wallowa

The Interest Rates are:

	Percent
Businesses and Small Agricultural Cooperatives Without Credit Available Elsewhere	4.000
Non-Profit Organizations Without Credit Available Elsewhere	2.625

The number assigned to this disaster for economic injury is 147160.

The States which received an EIDL Declaration # are Idaho, Montana, Oregon.

(Catalog of Federal Domestic Assistance Number 59008)

Maria Contreras-Sweet,
Administrator.

[FR Doc. 2016–11600 Filed 5–16–16; 8:45 am]

BILLING CODE 8025–01–P

SOCIAL SECURITY ADMINISTRATION

[Docket No. SSA–2016–0017]

Public Availability of Social Security Administration Fiscal Year (FY) 2015 Service Contract Inventory

AGENCY: Social Security Administration.

ACTION: Notice of public availability of FY 2015 Service Contract inventories.

SUMMARY: In accordance with section 743 of Division C of the Consolidated Appropriations Act of 2010 (Pub. L. 111–117), we are publishing this notice to advise the public of the availability of the FY 2015 Service Contract inventory. This inventory provides information on FY 2015 service contract actions over $25,000. We organized the information by function to show how we distribute contracted resources throughout the agency. We developed the inventory in accordance with guidance issued on December 19, 2011 by the Office of Management and Budget's Office of Federal Procurement Policy (OFPP). OFPP's guidance is available at *http://www.whitehouse.gov/sites/default/files/omb/procurement/memo/service-contract-inventory-guidance.pdf.* You can access the inventory and summary of the inventory on our homepage at the following link: *http://www.socialsecurity.gov/sci.*

FOR FURTHER INFORMATION CONTACT: Maria Radvansky, Office of Budget, Social Security Administration, 6401 Security Boulevard, Baltimore, MD

21235–6401. Phone (410) 965–4696, email *Maria.Radvansky@ssa.gov.*

Patrick Perzan,

Deputy Associate Commissioner, Office of Budget, Office of Budget, Finance, Quality, and Management.

[FR Doc. 2016–11576 Filed 5–16–16; 8:45 am]

BILLING CODE 4191–02–P

DEPARTMENT OF STATE

[Public Notice: 9563]

Section 7058(c) Determination for Zika Virus

SUMMARY: Pursuant to section 7058(c) of the Department of State, Foreign Operations, and Related Appropriations Act, 2015 (Div. J, Pub. L. 113–235) and the authority delegated to her by the Secretary of State under Delegation of Authority 245–1, notice is hereby given that, on April 5, 2016, Deputy Secretary of State for Management and Resources Heather Higginbottom has determined that an international outbreak of the Zika virus is sustained, severe, and is spreading internationally, and that it is in the national interest to respond to the related Public Health Emergency of International Concern.

FOR FURTHER INFORMATION, PLEASE CONTACT: Aditi Nigam, U.S. Department of State, 2201 C Street NW., Washington, DC 20520, (202) 647–4029, *nigama@state.gov.*

SUPPLEMENTARY INFORMATION: Section 7058(c) of the Department of State, Foreign Operations, and Related Programs Appropriations Act, 2015 (Div. J, P.L. 113–235) provides that:

> If the Secretary of State determines and reports to the Committees on Appropriations that an international infectious disease outbreak is sustained, severe, and is spreading internationally, or that it is in the national interest to respond to a Public Health Emergency of International Concern, funds made available under title III of this Act may be made available to combat such infectious disease or public health emergency: Provided, That funds made available pursuant to the authority of this subsection shall be subject to prior consultation with, and the regular notification procedures of, the Committees on Appropriations.

Exercising this authority with respect to the Zika virus outbreak allows funds made available in the bilateral economic assistance accounts in the Department of State, Foreign Operations, and Related Programs Appropriations Act, 2015 to be used to respond to the Zika outbreak.

Dated: May 10, 2016.

Jonathan A. Margolis,

Acting Deputy Assistant Secretary for Science, Technology and Health, Bureau of Oceans and International Environmental and Scientific Affairs.

[FR Doc. 2016–11624 Filed 5–16–16; 8:45 am]

BILLING CODE 4710–09–P

DEPARTMENT OF STATE

[Public Notice: 9562]

30-Day Notice of Proposed Information Collection: Reporting Requirements on Responsible Investment in Burma

ACTION: Notice of request for public comment and submission to OMB of proposed collection of information.

SUMMARY: The Department of State has submitted the information collection described below to the Office of Management and Budget (OMB) for approval. In accordance with the Paperwork Reduction Act of 1995 we are requesting comments on this collection from all interested individuals and organizations. The purpose of this Notice is to allow 30 days for public comment.

DATES: Submit comments directly to the Office of Management and Budget (OMB) up to June 16, 2016.

ADDRESSES: Direct comments to the Department of State Desk Officer in the Office of Information and Regulatory Affairs at the Office of Management and Budget (OMB). You may submit comments by the following methods:

- *Email: oira_submission@omb.eop.gov.* You must include the DS form number, information collection title, and the OMB control number in the subject line of your message.
- *Fax:* 202–395–5806. Attention: Desk Officer for Department of State.

FOR FURTHER INFORMATION CONTACT: Direct requests for additional information regarding the collection listed in this notice, including requests for copies of the proposed collection instrument and supporting documents, to Stacey May, U.S. Department of State, DRL/EAP Suite 7817, 2201 C St. NW., Washington, DC 20520, who may be reached on 202–647–8260 or at *maysa2@state.gov.*

SUPPLEMENTARY INFORMATION:

- *Title of Information Collection:* Reporting Requirements on Responsible Investment in Burma.
- *OMB Control Number:* 1405–0209.
- *Type of Request:* Extension of a Currently Approved Collection.
- *Originating Office:* Bureau of Democracy, Human Rights, and Labor Multilateral and Global Affairs (DRL/MLGA).
- *Form Number:* No form.
- *Respondents:* U.S. persons and entities engaged in new investment in Burma in an amount over $500,000 in aggregate, per OFAC General License 17, which authorizes new investment in Burma.
- *Estimated Number of Respondents:* 150.
- *Estimated Number of Responses:* 150.
- *Average Time per Response:* 21 hours.
- *Total Estimated Burden Time:* 3,150 hours.
- *Frequency:* Within 180 days of new investment in Burma over $500,000, annually thereafter.
- *Obligation to Respond:* Mandatory.

We are soliciting public comments to permit the Department to:

- Evaluate whether the proposed information collection is necessary for the proper functions of the Department.
- Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used.
- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Please note that comments submitted in response to this Notice are public record. Before including any detailed personal information, you should be aware that your comments as submitted, including your personal information, will be available for public review.

Abstract of Proposed Collection

Section 203(a)(1)(B) of the International Emergency Economic Powers Act (IEEPA) grants the President authority to, inter alia, prevent or prohibit any acquisition or transaction involving any property, in which a foreign country or a national thereof has any interest, by any person, or with respect to any property, subject to the jurisdiction of the United States, if the President declares a national emergency with respect to any unusual and extraordinary threat, which has its source in whole or substantial part outside the United States, to the national security, foreign policy, or economy of the United States. *See* 50 U.S.C. 1701 *et seq.*

In Executive Order 13047 of May 20, 1997, the President determined that the actions and policies of the Government of Burma, including its large-scale repression of the democratic opposition in Burma, constituted an unusual and extraordinary threat to the national security and foreign policy of the United States, declared a national emergency to deal with that threat, and prohibited new investment in Burma. In subsequent Executive Orders, the President modified the scope of the national emergency to address additional concerns with the actions and policies of the Government of Burma. In Executive Order 13448 of October 18, 2007, the President modified the emergency to address the continued repression of the democratic opposition in Burma, manifested in part through the commission of human rights abuses and pervasive public corruption. In Executive Order 13619 of July 11, 2012, the President further modified the emergency to address, inter alia, human rights abuses particularly in ethnic areas.

In response to several political reforms by the Government of Burma and pursuant to authority granted by IEEPA, the Department of the Treasury's Office of Foreign Assets Control (OFAC) issued a general license (GL 17) on July 11, 2012 authorizing new investment in Burma, subject to certain restrictions and conditions.

In order to support the Department of State's efforts to assess the extent to which new U.S. investment authorized by GL 17 furthers U.S. foreign policy goals of improving human rights protections and facilitating political reform in Burma, GL 17 requires U.S. persons engaging in new investment in Burma to report to the Department of State information related to such investment, as laid out in the "Reporting Requirements on Responsible Investment in Burma," (hereafter referred to as the "collection"). This collection is authorized by section 203(a)(2) of IEEPA, which grants the President authority to keep a full record of, and to furnish under oath, in the form of reports or otherwise, complete information relative to any act or transaction referred to in section 203(a)(1) of IEEPA.

Methodology

The Department of State will collect the information requested via electronic submission.

Additional Information

It is the overarching policy goal of the U.S. Government to support political reform in Burma towards the establishment of a peaceful, prosperous, and democratic state that respects human rights and the rule of law. In the past, some foreign investment in Burma has been linked to human rights abuses, particularly in the area of natural resource development in ethnic minority regions. For example, some foreign investments have entailed acquisition and control of land in disputed ethnic minority territories exacerbating or contributing to both social unrest and armed conflict and leading to adverse community and/or environmental impacts. Increased military/security presence, particularly in disputed ethnic minority areas, to provide security for foreign investment projects is reported to have led to seizures of farm land, involuntary relocations, forced labor, torture, summary execution, and sexual violence.

The collection will help the Department of State, in consultation with other relevant government agencies, to evaluate whether easing the ban on investment by U.S. persons advances U.S. foreign policy goals to address the national emergency with respect to Burma. In addition, the Department of State will use the collection as a basis to conduct informed consultations with U.S. businesses to encourage and assist such businesses to develop robust policies and procedures to address any potential adverse human rights, worker rights, anti-corruption, environmental, or other impacts resulting from their investments and operations in Burma. The Department of State will use the collection of information about new investment with the Myanmar Oil and Gas Enterprise (MOGE) to track investment that involves MOGE and to identify investors with whom it may be beneficial to have targeted consultation on anti-corruption and human rights policies. The public, including civil society actors in Burma, may use publicly available information resulting from the collection to engage U.S. businesses on their responsible investment policies and procedures and to monitor the Burmese government's management of revenues from investment.

U.S. persons to whom this requirement applies will be required to submit a version of the report to the U.S. Government for public release, from which information considered in good faith to be exempt from disclosure under FOIA Exemption 4—*i.e.* trade secrets or commercial or financial information that is privileged or confidential—may be withheld. The Department of State will make this version of the report publically available in order to promote transparency with respect to new U.S. investments in Burma. In the past, the absence of transparency or publicly available information with respect to foreign investment activities in Burma has contributed to corruption and misuse of public funds, the erosion of public trust, and social unrest in ethnic minority areas and has led to further human rights abuses and repression by the government and military. Public disclosure of certain aspects of the collection therefore will promote the policy of transparency through new U.S. investment, a key U.S. foreign policy objective in Burma.

Burmese civil society groups, particularly those representing ethnic minority communities, have requested that the Department of State make public certain information obtained through the collection on investments purportedly made for the benefit of the Burmese people, as a means of holding their own government accountable. Nobel Peace Prize laureate Aung San Suu Kyi, leader of Burma's democratic opposition party and recently elected to a seat in Burma's parliament, also underscored the importance of transparency in her recent remarks in Bangkok, noting that she did not want "more investment to mean more possibilities for corruption." This was among the most specific of the recommendations she made to the international community, stressing that "Transparency is very important if we are going to avoid problems in the future . . . So whatever investments, governmental agreements, whatever aid might be proposed, please make sure that it is transparent, that the people of Burma are in a position to understand what has been done, and how and for whom the benefits are intended."

Therefore public release of portions of this collection is aimed at providing civil society this type of information to both ensure the transparency of U.S. investment in Burma and to encourage civil society to partner with their government and U.S. companies towards building responsible investment, which ultimately promotes U.S. foreign policy goals.

Susan O'Sullivan,

Acting Deputy Assistant Secretary, Department of State.

[FR Doc. 2016–11707 Filed 5–13–16; 4:15 pm]

BILLING CODE 4710–18–P

DEPARTMENT OF STATE

[Public Notice: 9565]

60-Day Notice of Proposed Information Collection: Technology Security/Clearance Plans, Screening Records, and Non-Disclosure Agreements

ACTION: Notice of request for public comment.

SUMMARY: The Department of State is seeking Office of Management and Budget (OMB) approval for the information collection described below. In accordance with the Paperwork Reduction Act of 1995, we are requesting comments on this collection from all interested individuals and organizations. The purpose of this notice is to allow 60 days for public comment preceding submission of the collection to OMB.

DATES: The Department will accept comments from the public up to July 18, 2016.

ADDRESSES: You may submit comments by any of the following methods:

- *Web:* Persons with access to the Internet may comment on this notice by going to *www.Regulations.gov.* You can search for the document by entering "Docket Number: DOS–2016–0027" in the Search field. Then click the "Comment Now" button and complete the comment form.
- *Email: DDTCPublicComments@state.gov.*
- *Regular Mail:* Send written comments to: PM/DDTC, SA–1, 12th Floor, Directorate of Defense Trade Controls, Bureau of Political-Military Affairs, U.S. Department of State, Washington, DC 20522–0112.

You must include the DS form number (if applicable), information collection title, and the OMB control number in any correspondence.

FOR FURTHER INFORMATION CONTACT: Direct requests for additional information regarding the collection listed in this notice to: Steve Derscheid—PM/DDTC, SA–1, 12th Floor, Directorate of Defense Trade Controls, Bureau of Political–Military Affairs, U.S. Department of State, Washington, DC 20522–0112, who may be reached via email at *DerscheidSA@state.gov.*

SUPPLEMENTARY INFORMATION:

- *Title of Information Collection:* Technology Security/Clearance Plans, Screening Records, and Non-Disclosure Agreements Pursuant to 22 CFR 126.18(c)(2).
- *OMB Control Number:* 1405–0195.
- *Type of Request:* Extension of Currently Approved Collection.
- *Originating Office:* Bureau of Political-Military Affairs, Directorate of Defense Trade Controls (PM/DDTC).
- *Form Number:* No form.
- *Respondents:* Business and Nonprofit Organizations.
- *Estimated Number of Respondents:* 10,000.
- *Estimated Number of Responses:* 10,000.
- *Average Time per Response:* 10 hours.
- *Total Estimated Burden Time:* 100,000 hours.
- *Frequency:* On occasion.
- *Obligation to Respond:* Mandatory.

We are soliciting public comments to permit the Department to:

- Evaluate whether the proposed information collection is necessary for the proper functions of the Department.
- Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used.
- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Please note that comments submitted in response to this Notice are public record. Before including any detailed personal information, you should be aware that your comments as submitted, including your personal information, will be available for public review.

Abstract of Proposed Collection

The export, temporary import, and brokering of defense articles, defense services, and related technical data are licensed by the Directorate of Defense Trade Controls (DDTC) in accordance with the International Traffic in Arms Regulations ("ITAR," 22 CFR parts 120–130) and section 38 of the Arms Export Control Act.

ITAR § 126.18 eliminates, subject to certain conditions, the requirement for an approval by DDTC of the transfer of unclassified defense articles, which includes technical data, to or within a foreign business entity, foreign governmental entity, or international organization that is an authorized end-user or consignee (including transfers to approved sub-licensees) for defense articles, including the transfer to dual nationals or third-country nationals who are bona fide regular employees directly employed by the foreign consignee or end-user.

To use ITAR § 126.18, effective procedures must be in place to prevent diversion to any destination, entity, or for purposes other than those authorized by the applicable export license or other authorization. Those conditions can be met by requiring a security clearance approved by the host nation government for its employees, or the end-user or consignee have in place a process to screen all its employees and to have executed a Non-Disclosure Agreement that provides assurances that the employee will not transfer any defense articles to persons or entities unless specifically authorized by the consignee or end-user. ITAR § 126.18(c)(2) also provides that the technology security/clearance plans and screening records shall be made available to DDTC or its agents for law enforcement purposes upon request.

Methodology

When information kept on file pursuant to this recordkeeping requirement is required to be sent to the Directorate of Defense Trade Controls, it may be sent electronically or by mail according to guidance given by DDTC.

Dated: May 11, 2016.

Lisa Aguirre,

Managing Director, Directorate of Defense Trade Controls, Department of State.

[FR Doc. 2016–11620 Filed 5–16–16; 8:45 am]

BILLING CODE 4710–25–P

DEPARTMENT OF STATE

[Public Notice: 9564]

60-Day Notice of Proposed Information Collection: U.S. Passport Renewal Application for Eligible Individuals

ACTION: Notice of request for public comment.

SUMMARY: The Department of State is seeking Office of Management and Budget (OMB) approval for the information collection described below. In accordance with the Paperwork Reduction Act of 1995, we are requesting comments on this collection from all interested individuals and organizations. The purpose of this notice is to allow 60 days for public comment preceding submission of the collection to OMB.

DATES: The Department will accept comments from the public up to July 18, 2016.

ADDRESSES: You may submit comments by any of the following methods:

- *Web:* Persons with access to the Internet may comment on this notice by going to *www.Regulations.gov.* You can search for the document by entering "Docket Number: DOS–2016–0025" in the Search field. Then click the "Comment Now" button and complete the comment form.

- *Email: PPTFormsOfficer@state.gov.*

You must include the DS form number (if applicable), information collection title, and the OMB control number in any correspondence.

FOR FURTHER INFORMATION CONTACT: Direct requests for additional information regarding the collection listed in this notice, including requests for copies of the proposed collection instrument and supporting documents, to PPT Forms Officer, U.S. Department of State, CA/PPT/S/L, 44132 Mercure Cir., P.O. Box 1227, Sterling, VA 20166–1227, or at *PPTFormsOfficer@state.gov.*

SUPPLEMENTARY INFORMATION:

- *Title of Information Collection:* U.S. Passport Renewal Application for Eligible Individuals.
- *OMB Control Number:* 1405–0020.
- *Type of Request:* Revision of a Currently Approved Collection.
- *Originating Office:* Bureau of Consular Affairs, Passport Services, Office of Legal Affairs and Law Enforcement Liaison (CA/PPT/S/L).
- *Form Number:* DS–82.
- *Respondents:* Individuals applying for a U.S. passport.
- *Estimated Number of Respondents:* 7,261,667.
- *Estimated Number of Responses:* 7,261,667.
- *Average Time per Response:* 40 Minutes.
- *Total Estimated Burden Time:* 4,841,111 hours.
- *Frequency:* On occasion.
- *Obligation to Respond:* Required to Obtain a Benefit.

We are soliciting public comments to permit the Department to:

- Evaluate whether the proposed information collection is necessary for the proper functions of the Department.
- Evaluate the accuracy of our estimate of the time and cost burden for this proposed collection, including the validity of the methodology and assumptions used.
- Enhance the quality, utility, and clarity of the information to be collected.
- Minimize the reporting burden on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Please note that comments submitted in response to this Notice are public record. Before including any detailed personal information, you should be aware that your comments as submitted, including your personal information, will be available for public review.

Abstract of Proposed Collection

The information collected on the DS–82 is used to facilitate the issuance of passports to U.S. citizens and nationals. The primary purpose of soliciting the information is to establish citizenship, identity, and entitlement to the issuance of the U.S. passport or related service, and to properly administer and enforce the laws pertaining to the issuance thereof.

The DS–82 solicits data necessary for Passport Services to issue a United States passport (book and/or card format) in the exercise of authorities granted to the Secretary of State in 22 United States Code (U.S.C.) section 211a *et seq.* and Executive Order (EO) 11295 (August 5, 1966) for the issuance of passports to U.S. nationals.

The issuance of U.S. passports requires the determination of identity, nationality, and entitlement, with reference to the provisions of title III of the Immigration and Nationality Act (INA) (8 U.S.C. 1401–1504), the 14th Amendment to the Constitution of the United States, other applicable treaties and laws and implementing regulations at 22 CFR part 50 and 51. The specific regulations pertaining to the Application for a U.S. Passport by Mail are at 22 CFR 51.20 and 51.21

Methodology

Passport Services collects information from U.S. citizens and non-citizen nationals who complete and submit the U.S. Passport Renewal Application. Passport applicants can either download the DS–82 from the internet or obtain one from an Acceptance Facility/ Passport Agency. The form must be completed, signed, and submitted along with the applicant's previous U.S. passport.

U.S. citizens overseas may download the DS–82 from the Internet or obtain one from the nearest U.S. embassy or consulate, along with the procedures to be followed when applying overseas.

Additional Information

The Privacy Act statement has been amended to clarify that an applicant's failure to provide his or her Social Security number may result in the denial of an application, consistent with section 32101 of the Fixing America's Surface Transportation Act (Pub. L. 114–94), which authorizes the Department to deny U.S. passport applications when the applicant failed to include his or her Social Security number. It also makes clear that failure to include one's Social Security number may also subject the applicant to a penalty enforced by the International Revenue Service. These requirements and the underlying legal authorities are further described on page 3 of the instructions titled "Federal Tax Law" which has also been amended to include a reference to Public Law 114–94.

Dated: May 9, 2016.

Brenda S. Sprague,

Deputy Assistant Secretary for Passport Services, Bureau of Consular Affairs, Department of State.

[FR Doc. 2016–11623 Filed 5–16–16; 8:45 am]

BILLING CODE 4710–06–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Agency Information Collection Activities: Requests for Comments; Clearance of Renewed Approval of Information Collection: Application for Employment With the Federal Aviation Administration; Withdrawal

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice and request for comments; withdrawal.

SUMMARY: This action withdraws the Notice to collect information to process and report Unmanned Aircraft Systems (UAS) airborne and ground based observations by the public of drone behavior that they consider suspicious or illegal. The document contained errors, and needs further clarification.

DATES: May 17, 2016.

FOR FURTHER INFORMATION CONTACT: Ronda Thompson, Room 441, Federal Aviation Administration, ASP–110, 950 L'Enfant Plaza SW., Washington, DC 20024, by phone at (202) 267–1416, or by email at *Ronda.Thompson@faa.gov.*

SUPPLEMENTARY INFORMATION: The FAA published in the **Federal Register** of May 10, 2016 (81 FR 28930) a Notice and request for comments on the FAA's intention to request Office of Management and Budget (OMB) approval for a new information collection to process and report UAS airborne and ground based observations by the public of drone behavior that they consider suspicious or illegal. The Notice and request for comments contained errors; therefore the Notice and request for comments is being withdrawn.

The Withdrawal

In consideration of the foregoing, the Notice and request for comments as published in the **Federal Register** of May 10, 2016 (81 FR 28930) FR Doc. 2016–10976, is hereby withdrawn.

Issued in Washington, DC, on May 12, 2016.

Lorelei Peter,

Assistant Chief Counsel for Regulations.

[FR Doc. 2016–11573 Filed 5–12–16; 11:15 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Buy America Waiver Notification

AGENCY: Federal Highway Administration (FHWA), Department of Transportation (DOT).

ACTION: Notice.

SUMMARY: This notice provides information regarding FHWA's finding that a Buy America waiver is appropriate for the obligation of Federal-aid funds for 34 State projects involving the acquisition of vehicles and equipment on the condition that they be assembled in the U.S.

DATES: The effective date of the waiver is May 18, 2016.

FOR FURTHER INFORMATION CONTACT: For questions about this notice, please contact Mr. Gerald Yakowenko, FHWA Office of Program Administration, telephone 202–366–1562, or via email at *gerald.yakowenko@dot.gov.* For legal questions, please contact Ms. Jennifer Mayo, FHWA Office of the Chief Counsel, 202–366–1523, or via email at *jennifer.mayo@dot.gov.* Office hours for the FHWA are from 8:00 a.m. to 4:30 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Electronic Access

An electronic copy of this document may be downloaded from the **Federal Register**'s Web site at *http://www.archives.gov* and the Government Printing Office's database at *http://www.access.gpo.gov/nara.*

Background

This notice provides information regarding FHWA's finding that a Buy America waiver is appropriate for the obligation of Federal-aid funds for 34 State projects involving the acquisition of vehicles (including sedans, vans, pickups, trucks, buses, and street sweepers) and equipment (such as trail grooming equipment) on the condition that they be assembled in the U.S. The waiver would apply to approximately 2,528 vehicles and equipment acquisitions. The requests for the fourth quarter of calendar year 2015, available at *http://www.fhwa.dot.gov/construction/contracts/cmaq160317.cfm,* are incorporated by reference into this notice. These projects are being undertaken to implement air quality improvement, safety, and mobility goals under FHWA's Congestion Mitigation and Air Quality Improvement Program and the Recreational Trails Program.

Title 23, section 635.410, Code of Federal Regulations (23 CFR 635.410) requires that steel or iron materials (including protective coatings) that will be permanently incorporated in a Federal-aid project must be manufactured in the U.S. For FHWA, this means that all the processes that modified the chemical content, physical shape or size, or final finish of the material (from initial melting and mixing, continuing through the bending and coating) occurred in the U.S. The statute and regulations create a process for granting waivers from the Buy America requirements when its application would be inconsistent with the public interest or when satisfactory quality domestic steel and iron products are not sufficiently available.

In 1983, FHWA determined that it was both in the public interest and consistent with the legislative intent to waive Buy America for manufactured products other than steel manufactured products. However, FHWA's national waiver for manufactured products does not apply to the requests in this notice because they involve predominately steel and iron manufactured products. The FHWA's Buy America requirements do not have special provisions for applying Buy America to "rolling stock" such as vehicles or vehicle components (see 49 U.S.C. 5323(j)(2)(C), 49 CFR 661.11, and 49 U.S.C. 24405(a)(2)(C) for examples of Buy America rolling stock provisions for other DOT agencies).

Based on all the information available to the agency, FHWA concludes that there are no domestic manufacturers that produce the vehicles and vehicle components identified in this notice in such a way that their steel and iron elements are manufactured domestically. The FHWA's Buy America requirements were tailored to the types of products that are typically used in highway construction, which generally meet the requirement that steel and iron materials be manufactured domestically. In today's global industry, vehicles are assembled with iron and steel components that are manufactured all over the world. The FHWA is not aware of any domestically produced vehicle on the market that meets FHWA's Buy America requirement to have all its iron and steel be manufactured exclusively in the U.S. For example, the Chevrolet Volt, which was identified by many commenters in a November 21, 2011, **Federal Register** Notice (76 FR 72027) as a car that is made in the U.S., is comprised of only 45 percent of U.S. and Canadian content according to the National Highway Traffic Safety Administration's part 583 American Automobile Labeling Act Report Web page *(http://www.nhtsa.gov/Laws+&+Regulations/Part+583+American+Automobile+Labeling+Act+(AALA)+Reports).* Moreover, there is no indication of how much of this 45 percent content is U.S. manufactured (from initial melting and mixing) iron and steel content.

In accordance with Division K, section 122 of the Consolidated and Further Continuing Appropriations Act of 2015 (Pub. L. 113–235), FHWA published a notice of intent to issue a waiver on its Web site at *http://www.fhwa.dot.gov/construction/contracts/waivers.cfm?id=119* on March 17th. The FHWA received 11 comments in response to the publication. Three commenters support granting the waiver and stated that "the vehicles represent an ideal way for domestic clean fuel to be used and help air quality, economic security, and the regions." Five commenters opposed granting the waiver and three commenters provided general comments suggesting that: (1) Buy America is supposed to bring manufacturing jobs back home; (2) the list is very expansive and appeared to be a list of products that are based on preference but could not be purchased domestically; and (3) some of the Recreational Trail items are specialized items available off the shelf. These commenters did not provide a recommendation for domestic products that fully comply with FHWA's Buy America requirements.

Based on FHWA's conclusion that there are no domestic manufacturers that can produce the vehicles and equipment identified in this notice in such a way that steel and iron materials are manufactured domestically, and after consideration of the comments received, FHWA finds that application of FHWA's Buy America requirements to these products is inconsistent with the public interest (23 U.S.C. 313(b)(1) and 23 CFR 635.410(c)(2)(i)).

However, FHWA believes that it is in the public interest and consistent with the Buy America requirements to impose the condition that the vehicles and the vehicle components be assembled in the U.S. Requiring final assembly to be performed in the U.S. is consistent with past guidance to FHWA Division Offices on manufactured products (see Memorandum on Buy America Policy Response, December 22, 1997, *http://www.fhwa.dot.gov/programadmin/contracts/122297.cfm*). A waiver of the Buy America requirement without any regard to where the vehicle is assembled would diminish the purpose of the Buy America requirement. Moreover, in today's economic environment, the Buy America requirement is especially significant in that it will ensure that Federal Highway Trust Fund dollars are used to support and create jobs in the U.S. This approach is similar to the conditional waivers previously given for various vehicle projects. Thus, so long as the final assembly of the 34 State projects occurs in the U.S., applicants to this waiver request may proceed to purchase these vehicles and equipment consistent with the Buy America requirement.

In accordance with the provisions of section 117 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Technical Corrections Act of 2008 (Pub. L. 110–244), FHWA is providing this notice of its finding that a public interest waiver of Buy America requirements is appropriate on the condition that the vehicles and equipment identified in the notice be assembled in the U.S. The FHWA invites public comment on this finding for an additional 15 days following the effective date of the finding. Comments may be submitted to FHWA's Web site via the link provided to the waiver page noted above.

Authority: 23 U.S.C. 313; PL 110–161; 23 CFR 635.410.

Issued on: May 9, 2016.

Gregory G. Nadeau,

Administrator, Federal Highway Administration.

[FR Doc. 2016–11579 Filed 5–16–16; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Buy America Waiver Notification

AGENCY: Federal Highway Administration (FHWA), Department of Transportation (DOT).

ACTION: Notice.

SUMMARY: This notice provides information regarding FHWA's finding that a Buy America waiver is appropriate for the use of non-domestic motor and machinery brakes (maximum torque 100 ft-lb, wheel size 8 inches) for the rehabilitation of a bascule bridge in Port Clinton, Ohio.

DATES: The effective date of the waiver is May 18, 2016.

FOR FURTHER INFORMATION CONTACT: For questions about this notice, please contact Mr. Gerald Yakowenko, FHWA Office of Program Administration, 202–366–1562, or via email at *gerald.yakowenko@dot.gov.* For legal questions, please contact Ms. Jennifer Mayo, FHWA Office of the Chief Counsel, 202–366–1523, or via email at *jennifer.mayo@dot.gov.* Office hours for the FHWA are from 8:00 a.m. to 4:30 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Electronic Access

An electronic copy of this document may be downloaded from the **Federal Register**'s home page at *http://www.archives.gov* and the Government Printing Office's database at *http://www.access.gpo.gov/nara.*

Background

The FHWA's Buy America policy in 23 CFR 635.410 requires a domestic manufacturing process for any steel or iron products (including protective coatings) that are permanently incorporated in a Federal-aid construction project. The regulation also provides for a waiver of the Buy America requirements when the application would be inconsistent with the public interest or when satisfactory quality domestic steel and iron products are not sufficiently available. This notice provides information regarding FHWA's finding that a Buy America waiver is appropriate for use of non-domestic motor and machinery brake systems (maximum torque 100 ft-lb, wheel size 8 inches) for rehabilitation of a bascule bridge in Port Clinton, Ohio.

In accordance with Division K, section 122 of the Consolidated and Further Continuing Appropriations Act of 2015 (Pub. L. 113–235), FHWA published a notice of intent to issue a waiver on its Web site *(http://www.fhwa.dot.gov/construction/contracts/waivers.cfm?id=121*) on March 22nd. The FHWA received no comments in response to the publication. Based on all the information available to the agency, FHWA concludes that there are no domestic manufacturers of motor and machinery brake systems (maximum torque 100 ft-lb, wheel size 8 inches) for rehabilitation of the bascule bridge in Port Clinton, Ohio.

In accordance with the provisions of section 117 of the SAFETEA–LU Technical Corrections Act of 2008 (Pub. L. 110–244), FHWA is providing this notice that a waiver of Buy America requirements is appropriate. The FHWA invites public comment on this finding for an additional 15 days following the effective date of the finding. Comments may be submitted to FHWA's Web site via the link provided to the waiver page noted above.

Authority: 23 U.S.C. 313; Public Law 110–161, 23 CFR 635.410.

Issued on: May 9, 2016.

Gregory G. Nadeau,

Administrator, Federal Highway Administration.

[FR Doc. 2016–11578 Filed 5–16–16; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

[Docket No. FTA–2016–0025]

Notice of Proposed Buy America Waiver for Minivans

AGENCY: Federal Transit Administration, DOT.

ACTION: Notice of proposed Buy America waiver and request for comment.

SUMMARY: The Federal Transit Administration (FTA) received a formal request from the Pace Suburban Bus Division of the Regional Transportation Authority (Pace) for a Buy America non-availability waiver to purchase 188 Dodge Caravan minivans for its vanpool program. Minivans are considered rolling stock and are subject to the Buy America waiver set forth in 49 U.S.C. 5323(j)(2)(C), which requires that minivans (i) contain more than 60 percent domestic content, and (ii) final assembly of the vehicles occurs in the United States. Although initially Pace sought only a waiver of the requirement that final assembly take place in the United States, Pace now seeks a waiver of both requirements. Because FTA is aware of at least four manufacturers that can meet the final assembly requirement, however, FTA is proposing a waiver of only the domestic content requirement for non-ADA-accessible minivans. This waiver would apply to all procurements of non-ADA-accessible minivans by any FTA grantee and would be limited to contracts entered into before September 30, 2019 or until a fully compliant domestic source becomes available, whichever is earlier. In accordance with 49 U.S.C. 5323(j)(3)(A), FTA is providing notice of this proposed waiver and seeks public and industry comment on whether FTA should grant the waiver.

DATES: Comments must be received by May 31, 2016. Late-filed comments will be considered to the extent practicable.

ADDRESSES: Please submit your comments by one of the following means, identifying your submissions by docket number FTA–2016–0025:

1. *Web site: http://www.regulations.gov.* Follow the instructions for submitting comments on the U.S. Government electronic docket site.
2. *Fax:* (202) 493–2251.
3. *Mail:* U.S. Department of Transportation, 1200 New Jersey Avenue SE., Docket Operations, M–30, West Building, Ground Floor, Room W12–140, Washington, DC 20590–0001.
4. *Hand Delivery:* U.S. Department of Transportation, 1200 New Jersey Avenue SE., Docket Operations, M–30, West Building, Ground Floor, Room W12–140, Washington, DC 20590–0001 between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must make reference to the "Federal Transit Administration" and include docket number FTA–2016–0025. Due to the security procedures in effect since October 2011, mail received through the U.S. Postal Service may be subject to delays. Parties making submissions responsive to this notice should consider using an express mail firm to ensure the prompt filing of any submissions not filed electronically or by hand. Note that all submissions received, including any personal information therein, will be posted without change or alteration to *http://www.regulations.gov.* For more information, you may review DOT's complete Privacy Act Statement in the **Federal Register** published April 11, 2000 (65 FR 19477), or you may visit *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Laura Ames, FTA Attorney-Advisor, at (202) 366–2743 or *Laura.Ames@dot.gov.*

SUPPLEMENTARY INFORMATION: By way of background, Pace operates a vanpool program in the Chicago suburban area with more than 785 vehicles in service. A vanpool vehicle is defined, in pertinent part, as a vehicle with a seating capacity of at least six adults (not including the driver). *See* 49 U.S.C. 5323(i)(2)(C)(ii).

In October 2014, Pace issued an invitation for bid (IFB) for a five-year contract for the purchase of seven-person minivans. The successful bidder, Napoleon Fleet, Inc., proposed providing Chrysler Dodge Caravan minivans, but certified that the vehicles were not compliant with the Buy America requirement that the vehicles be assembled in the United States. Chrysler manufactures its minivans in Windsor, Ontario, Canada. On April 15, 2015, Pace requested a Buy America non-availability waiver for the procurement of 188 Dodge Caravan minivans based on the final assembly requirement only. Pace believed that the vehicles it proposed to purchase met the domestic content requirement.

In August 2015 and November 2015, Pace conducted pre-award Buy America audits of the Dodge Caravan minivans and discovered that Chrysler did not meet the current domestic content requirement of more than 60%. Pace notified FTA that the audit showed a 57.4% domestic content for 2015 minivans and only 52% domestic content for 2016 minivans. Pace, therefore, is requesting a waiver on the grounds that a seven-person minivan that complies with Buy America's domestic content and final assembly requirements is not available.

In addition to the request from Pace, FTA has received inquiries from other grantees and manufacturers about the asserted non-availability of minivans for their vanpool fleet that meet both requirements of Buy America. Therefore, FTA proposes to grant a general Buy America waiver from the domestic content requirement for non-ADA-accessible minivans procured pursuant to contracts entered into before September 30, 2019, or until a fully-compliant domestic source becomes available, whichever is earlier.

With certain exceptions, FTA's Buy America statute prevents FTA from obligating an amount that may be appropriated to carry out its program for a project unless "the steel, iron, and manufactured goods used in the project are produced in the United States." 49 U.S.C. 5323(j)(1). A manufactured product is considered produced in the United States if: (1) All of the manufacturing processes for the product must take place in the United States; and (2) All of the components of the product must be of U.S. origin. A component is considered of U.S. origin if it is manufactured in the United States, regardless of the origin of its subcomponents. 49 CFR 661.5(d). If, however, FTA determines that "the steel, iron, and goods produced in the United States are not produced in a sufficient and reasonably available amount or are not of a satisfactory quality," then FTA may issue a waiver (non-availability waiver). 49 U.S.C. 5323(j)(2)(B); 49 CFR 661.7(c).

The requirement that manufactured goods be produced in the United State may be waived for rolling stock if (i) the cost of components and subcomponents produced in the United States for fiscal years 2016 and 2017 is more than 60 percent of the cost of all components of the rolling stock; and (ii) final assembly of the rolling stock occurs in the United States.[1] 49 U.S.C. 5323(j)(2)(C).

FTA funds the procurement of between 2,500 and 3,000 minivans annually, including both ADA-accessible vans and non-ADA-accessible vans. The challenges associated with buying minivans that comply with FTA's Buy America statute and regulations have been well documented over the past six years. In 2010, El Dorado National, Kansas and Chrysler Group LLC petitioned FTA for a waiver of the Buy America final assembly requirement. In response to the request FTA published a notice in the **Federal Register**, seeking comment from all interested parties. Numerous parties responded to the notice expressing support for the waiver. One manufacturer, Honda, indicated that its minivans were in compliance with the Buy America regulations but would not provide the additional information needed to support its claims. Ultimately, on June 21, 2010, FTA issued a blanket waiver of the Buy America final assembly requirements for minivans and minivan chassis. *See* 75 FR 35123, (June 21, 2010).

On November 27, 2012, FTA rescinded the non-availability waiver for minivans, finding that the manufacturer of the MV–1 was a domestic manufacturer of eligible paratransit vehicles and could meet both the domestic content and the final assembly requirements for rolling stock under Buy America. *See* 75 FR 71676, (November 24, 2010). Although FTA acknowledged that the MV–1 minivan is a wheelchair-lift equipped minivan and does not provide the seating capacity needed for vanpool programs, FTA did not continue the blanket waiver for these vehicles, noting that it "prefers to consider waiver requests for limited circumstances and on procurement-by-procurement basis . . . ." *Id.*

On November 27, 2013, FTA issued a one-time, limited Buy America waiver of the final assembly requirement to the North Front Range Metropolitan Planning Organization (NFRMPO), for the purchase of 25 seven-passenger minivans, based upon non-availability. *See* 78 FR 71025, (November 27, 2013). FTA rejected comments suggesting that it reinstate the 2012 blanket waiver for seven-person minivans, and instead issued a waiver for final assembly for

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[1] Under recent amendments to 49 U.S.C. 5323(j)(2)(C), if the minivans are delivered in FY2018 or FY2019, the domestic content will increase to more than 65 percent and if delivered in FY2020 or beyond, the domestic content will increase to more than 70 percent.

NFRMPO's purchase of up to 25 minivans.

The market for non-ADA accessible minivans has changed since 2013. In 2013, the Chrysler minivan met the domestic content requirements but was not assembled in the United States. FTA issued a non-availability waiver for final assembly because more than 60 percent of the minivan's components were produced in the United States. Today, Chrysler does not meet either Buy America requirements. However, there are at least four manufacturers—GMC, Ford, Honda and Toyota—that make non-ADA-accessible minivans that are assembled in the U.S.[2]

Because there are at least four minivans manufacturers who assemble their vehicles in the United States, FTA will not grant Pace a non-availability waiver for both final assembly and domestic content. Instead, in order to maintain U.S. jobs and obtain the benefits of the Buy America statute, FTA proposes to grant a general waiver of only the domestic content requirement for non-ADA-accessible minivans. This waiver would apply to all procurements of non-ADA-accessible minivans and is limited to contracts entered into before September 30, 2019 or until a fully-compliant domestic source becomes available, whichever is earlier. Because the non-ADA-accessible minivans are production line vehicles sold to the general public (*i.e.*, they are not designed and manufactured specifically to be purchased using Federal funds), and those sales substantially outnumber purchases with Federal funds, manufacturers have been reluctant to subject their vehicles to the pre-award and post-delivery audit requirements in 49 CFR part 663 to verify their domestic content. FTA seeks comments on whether manufacturers would consider submitting to a pre-award and post-delivery audit process that was conducted by FTA on each new model year, as opposed to requiring audits for each individual procurement.

This waiver would not apply to ADA-accessible minivans because such vehicles are available that meet the Buy America requirements.

FTA is publishing this Notice to seek public and industry comment from all interested parties in accordance with 49 U.S.C. 5323(j)(3)(A). Such information and comments will help FTA understand completely the facts surrounding the request, including the merits of the request. A full copy of the request has been placed in docket number FTA–2016–0025.

Ellen Partridge,

Chief Counsel.

[FR Doc. 2016–11571 Filed 5–16–16; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

[Safety Advisory 16–2]

Contact Rail (Third Rail) System Hazards

AGENCY: Federal Transit Administration (FTA), Department of Transportation (DOT).

ACTION: Notice of Safety Advisory.

SUMMARY: The Federal Transit Administration (FTA) issued Safety Advisory 16–2 regarding contact rail system hazards on rail fixed guideway public transportation systems (RFGPTSs). A letter to the Managers of State Safety Oversight (SSO) programs with RFGPTSs that use a contact rail system, was also issued requesting data and information on contact rail system hazards occurring during calendar year 2015. Safety Advisory 16–2 and the accompanying letter are available in their entirety on the FTA public Web site at *http://www.fta.dot.gov/tso.html.*

DATES: FTA is asking the managers of the SSO programs to submit the requested data and information 90 days from issuance of the advisory.

FOR FURTHER INFORMATION CONTACT: For program matters, Sam Shelton, Office of System Safety, telephone (202) 366–0815 or *Sam.Shelton@dot.gov.* For legal matters, Scott Biehl, Senior Counsel, telephone (202) 366–0826 or *Scott.Biehl@dot.gov.*

SUPPLEMENTARY INFORMATION: Nationwide, 13 RFGPTS operate and maintain contact rail traction power electrification (TPE) systems to power trains that move millions of daily passengers in some of the nation's largest cities. Recently, the FTA has investigated several safety events related to failures of contact rail TPE systems, including:

- Smoke events caused by arcing insulators and traction power cable fires;
- An explosion caused by a flashover on porcelain insulators;
- A high-intensity fire caused by an electrical short circuit that resulted in the total loss of a traction power substation and major service disruptions;
- Damage to electrical propulsion equipment on dozens of railcars caused by spiking voltage that significantly impacted passenger service; and
- Poor track conditions exacerbated by electrolysis and corrosion from stray current, which degraded anchor bolts and fasteners to the point of failure in a tunnel.

The FTA finds sufficient evidence that each SSOA with an RFGPTS operating and maintaining a contact rail TPE system should investigate potential hazards associated with these systems through its hazard management program specified at 49 CFR 659.31. Further, in accordance with its authority at 49 CFR 659.39(d) to periodically request program information from the SSOAs,[1] the FTA asks these SSOAs to collect the information requested below.

(1) A brief description of the RFGPTS contact rail TPE system and components.

(2) A brief description regarding any major changes or upgrades to the contact rail TPE system made over the last 10 years and whether the traction power cables were also upgraded.

(3) A brief description of the RFGPTS preventive maintenance program in place to determine the insulation integrity of traction power feeder cables (*i.e.*, meggering, hipot testing, metering or other testing program). If such a program does not exist, or has been modified or eliminated, please explain in the response.

(4) The approximate percentage of traction power feeder cables used by the RFGPTS that are low smoke and zero halogen emission cables. Please specify the type and manufacturer.

(5) A brief description of the construction and installation processes used to manage potential impacts of vibration, friction, rubbing, etc. on traction power cables, and whether protective matting is used for cables lying along the ballast and tunnel invert.

(6) A listing of any corrective action plans (CAPs) required and approved by the SSOA related to the traction power electrification system since calendar year 2012 and their status, to include both open and closed CAPs.

(7) A copy of the RFGPTS inspection, testing, and maintenance program manual for its contact rail TPE system.

(8) The RFGPTS definition of "arcing insulator."

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[2] This information is from the 2016 report submitted by car manufacturers to the National Highway Transportation Safety Administration (NHTSA) under the American Automobile Labeling Act. A copy of the report is posted on NHTSA's Web site at *http://www.nhtsa.gov.*

[1] Please note, on March 16, 2016, FTA issued a final rule for State Safety Oversight that will eventually replace the longstanding regulations at 49 CFR part 659. See, 81 FR 14230–62. SSOAs and RFGPTSs must continue to comply with 49 CFR part 659, however, until they come into compliance with the new regulations, which have been codified at 49 CFR part 674.

(9) The following safety event information for calendar year 2015:

a. The total number of times a fire department responded to smoke conditions at the RFGPTS related to the contact rail TPE system;

b. The total number of smoke/fire events related to the contact rail TPE system that resulted in evacuations for fire/life safety reasons at the RFGPTS; and

c. The total number of fatalities and injuries and the total amount of property damage at the RFGPTS resulting from smoke/fire events related to the contact rail TPE system.

(10) A description of any hazards, issues, or concerns related to the contact rail TPE system reported to, identified and/or investigated by the SSOA during calendar year 2015.

The cooperation of the rail transit industry would be very helpful in developing a better understanding of contact rail system hazards, and in due course, a strategy for mitigating the safety risks created by these hazards.

Issued in Washington, DC, this 12th day of May, 2016.

Carolyn Flowers,

Acting Administrator.

[FR Doc. 2016–11580 Filed 5–16–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

[Docket No. FTA–2016–0024]

Compendium of Public Transportation Safety Standards

AGENCY: Federal Transit Administration (FTA), DOT.

ACTION: Request for comments.

SUMMARY: FTA is inviting the public to evaluate and provide comments on its Compendium of transit safety standards and protocols. The Fixing America's Surface Transportation Act (FAST Act) requires the Secretary of Transportation to conduct a review of public transportation safety standards and protocols to document existing standards and protocols and examine their efficacy. Following the review, the Secretary also is required to engage with the public in an evaluation of the standards to assess the need to establish additional Federal minimum public transportation safety standards. Upon completion of the review and evaluation, the Secretary must issue a report presenting the findings of the review of standards; the outcome of the evaluation; a comprehensive set of recommendations to improve the safety of the public transportation industry, including recommendations for regulatory changes, if applicable; and actions that the Secretary of the Department of Transportation will take to address the recommendations provided.

DATES: Comments must be submitted by June 16, 2016. Comments filed after the deadline will be considered to the extent practicable.

ADDRESSES: Please submit your comments by only one of the following methods, identifying your submission by Docket Number (FTA–2016–0024).

- *Federal eRulemaking Portal:* Submit electronic comments and other data to *http://www.regulations.gov.*
- *U.S. Mail:* Send comments to Docket Operations, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building, Ground Floor, at 1200 New Jersey Avenue SE., Washington, DC, between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.
- *Fax:* Fax comments to Docket Operations, U.S. Department of Transportation, at (202) 493–2251.

Instructions: You must include the agency name (Federal Transit Administration) and Docket Number (FTA–2016–0024) for this notice, at the beginning of your comments. If sent by mail, submit two copies of your comments. Due to security procedures in effect since October 2001, mail received through the U.S. Postal Service may be subject to delays. Parties submitting comments should consider using an express mail firm to ensure the prompt filing of any submissions not filed electronically or by hand. If you wish to receive confirmation that FTA received your comments, you must include a self-addressed stamped postcard. All comments received will be posted without change to *http://www.regulations.gov,* including any personal information provided. Anyone is able to search the electronic form for all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the United States Department of Transportation's (DOT) Privacy Act system of records notice for the DOT Federal Docket Management System (FDMS) in the **Federal Register** published on December 29, 2010 (75 FR 82132) at *http://www.gpo.gov/fdsys/pkg/FR-2010-12-29/pdf/2010-32876.pdf.*

FOR FURTHER INFORMATION CONTACT: For program matters, contact Brian Alberts, Office of Transit Safety and Oversight, (202) 366–1783 or *Brian.Alberts@dot.gov;* or Raj Wagley, Office or Research and Innovation, (202)–366–5386 or *Raj.Wagley@dot.gov.*

Office hours are from 8:30 a.m. to 5:00 p.m., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

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I. Overview

Section 3020 of the FAST Act requires the Secretary of Transportation to conduct a review of public transportation safety standards and protocols to assess the efficacy of those standards and protocols. The content of the review must include minimum safety performance standards developed by the public transportation industry and safety performance standards, practices, or protocols in use by rail fixed guideway public transportation systems. The review also must include rail and bus safety standards, practices, or protocols in use by public transportation systems regarding (1) rail and bus design and the workstation of rail and bus operators, (2) scheduling fixed route rail and bus service with adequate time and access for operators to use restroom facilities, (3) fatigue management, (4) and crash avoidance and worthiness. Section 3020(b) of the FAST Act requires the Secretary to conduct an evaluation following the review in consultation with the public transportation industry to assess the need to establish additional Federal minimum public transportation safety standards.

FTA has placed in the docket and on FTA's Web site its review of public transportation safety standards and protocols contained as a "Compendium of Public Transportation Safety Standards" (Compendium) provided in tabular format. Included within this Compendium are standards for all public transportation modes (where available), including commuter rail and ferry boat, modes for which regulatory oversight rests within another DOT modal administration. FTA seeks comments from the public transportation industry on the utilization of the standards contained within the Compendium, observations or data driven statements of the effectiveness of the standards, and areas for which standards should be established by FTA through subsequent rulemaking activity.

II. Summary of Compendium of Public Transportation Safety Standards

The Compendium includes those standards or protocols applicable to or used in those transit modes referenced in the National Transit Database, including: Rail Transit (Alaska Railroad, Cable Car, Commuter Rail, Heavy Rail, Hybrid Rail, Inclined Plan, Light Rail, Monorail/Automated Guideway, and Streetcar) and Non-Rail Transit (Aerial Tramway; Bus, Bus Rapid Transit, Commuter Bus, Demand Response, Demand Response Taxi, Ferryboat, Jitney, Público, Trolleybus, and Vanpool).

The Compendium identifies state and Federal regulations, minimum safety performance standards that have been developed by the public transportation industry (within modes described above), as well as those specific standards or protocols in use by rail fixed guideway public transportation systems, including those related to emergency plans and procedures for passenger evacuations, training programs that ensure personnel compliance and readiness in emergency situations, and coordination plans with emergency responders.

The Compendium is a single Excel file with individual tabs within the workbook titled "bus," "rail," "other modes," "and all modes" to aid in the review of the standards presented. Within each of these tabs, standards are presented alphabetically by specific source. As an example, standards and recommended practices from APTA would appear first and standards from "States" would be presented last. The Compendium is further organized by a series of worksheet column headings that include the title of the standard, and the type of standard and standard sub and sub-function categories, further defined below. The standard development entity, whether a Federal agency, Standard Development Organization (SDO), State, State Safety Oversight Agency (SSOA), or specific industry association is also identified. Hyperlinks to specific standards, protocols, and classification content are provided in the Compendium to allow an opportunity for a thorough review of those standards and protocols.

The "standard types" used in the Compendium include those standards and protocols related to vehicle standards (including performance), infrastructure and related items, operational standards, personnel (including operator and fatigue management), State of Good Repair (SGR), emergency/incident management, and training and certifications. Each of these standard types is presented below with associated standard sub categories.

Vehicle Standards: The Vehicle Standards include the following sub categories: Vehicle Components and Passenger Equipment Safety Standards; Vehicle Crashworthiness; Vehicle Interface/Communications Systems; and Vehicle Safety Standards (not related to design of construction).

Infrastructure Standards and Related Items: The Infrastructure Standards include the following sub categories: Infrastructure—Fixed Structures (includes elevators and escalator safety standards and recommended practices); Bridge Safety Standards; Track and Roadbed; and Signals and Grade Crossings.

Operational Standards: The Operational Standards include the following sub categories: Operating Rules and Practices and Personnel Communications/Communication Procedures.

Personnel Standards (including Operator and Fatigue Management): The Personnel Standards include the following sub categories: Hours of Service Standards, Workplace/Worker Safety, Qualifications and Certifications of Operators and Engineers, Medical Examination Certification, Drug and Alcohol Testing, and Training and Certifications.

State of Good Repair/Maintenance Standards: The State of Good Repair/Maintenance Standards include the following sub categories: Maintenance and Safety Inspection Standards.

Emergency/Incident Management Standards: The Emergency/Incident Management Standards include the following sub categories: Emergency Preparedness/Management and Incident Investigation, Reporting, and Recovery.

If a state or industry organization adopts a Federal regulation by reference or a standard developed by a standard development organization, this regulation or standard is not reflected in the section of the Compendium specific to that state or organization, but rather is included within the list of standards from the source Federal regulatory body or standard development organization.

III. Questions

FTA seeks specific comments, and any related statements or observations, to the following questions.

1. Are there standards in place for your system that are not reflected in the Compendium?

2. Are the standards utilized within your system, but not listed in the Compendium mandated or promulgated by a Federal or State agency, State Safety Oversight Agency, regional regulatory body, or other entity? If so, what are they?

3. What observations or data driven statements can you provide stating or documenting the effectiveness of the standards included in the Compendium (or those in place for your system, but not reflected in the Compendium)?

4. Based on your experiences or safety-related trends at your agency, are there areas of concern for which standards should be established by FTA through subsequent rulemaking activity? If so, what are they?

5. Are there specific transit modes and associated areas of risk that should be areas of focus for FTA more than others? If so, what are they?

6. If standards were established based on various determinants of risk, how should those areas of risk be prioritized? Should standards be established based on exposure rates (passenger/vehicle miles), number or rate of injuries, or number or rate of fatalities, as examples?

7. Are there any safety standards utilized in the public transportation industry that are not reflected in the Compendium nor in place within your agency that should be included in the Compendium? If so, what are they?

8. Are you aware of safety standards utilized in other industries that should be examined? If so, what are they?

9. FTA was unable to identify any standards or protocols relates to the following topics:

- Reduce blind spots,
- protect rail and bus operators from assaults, and
- allow sufficient time within route schedules for operators to use restroom facilities.

Are you aware of any existing safety standards or protocols that may address any of these areas of risk? If so, please identify each standard or protocol by its reference and source and provide information you may have related to the efficacy of such standard or protocol.

IV. Use of Stakeholder Comments

Comments received will be included in FTA's ongoing evaluation of safety standards and the effectiveness of those standards and will be reflected in the report issued in accordance with Section 3020(c) of the FAST Act.

Issued on: May 12, 2016.

Carolyn Flowers,

Acting Administrator.

[FR Doc. 2016–11585 Filed 5–16–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Reports, Forms, and Record Keeping Requirements Agency Information Collection Activity Under OMB Review

AGENCY: National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation (DOT).

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), this notice announces that the Information Collection Request (ICR) abstracted below has been forwarded to the Office of Management and Budget (OMB) for review and comment. The ICR describes the nature of the information collection and the expected burden. The **Federal Register** Notice with a 60-day comment period was published on March 21, 2016 (**Federal Register**/Vol. 81, No. 54/ pp.15147–15148).

DATES: Comments must be submitted on or before June 16, 2016.

ADDRESSES: Send comments, within 30 days, to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725–17th Street NW., Washington, DC 20503, Attention NHTSA Desk Officer.

FOR FURTHER INFORMATION CONTACT: Dr. Kristie Johnson, 202–366–2755.

SUPPLEMENTARY INFORMATION:

Title: Countermeasures That Work (9th and 10th Editions) and Countermeasures At Work (1st and 2nd Editions)

Type of Request: New information collection requirement.

Abstract: The National Highway Traffic Safety Administration (NHTSA) proposes to collect user feedback on the Countermeasures That Work and Countermeasures At Work guides. These guides were developed for the State Highway Safety Offices (SHSOs) to assist them in developing programs for implementing safety countermeasures in nine program areas: Alcohol-impaired and drugged driving, seat belt use and child restraints, aggressive driving and speeding, distracted and drowsy driving, motorcycle safety, young drivers, older drivers, pedestrians, and bicyclists. The Countermeasures That Work guide covers each program area in a separate chapter that includes a short background section relaying current data trends, which is followed by a description of applicable countermeasures, and an explanation their effectiveness, use, costs, and time to implement. The new (to be developed) Countermeasures At Work guide will elaborate on some of the countermeasures contained in the Countermeasures That Work guide by providing real world examples and details on localities where specific countermeasures were implemented. The countermeasure descriptions may include details about locality size, implementation issues, cost, stakeholders to involve, challenges, evaluation, and outcomes. To collect this information for the new guide, NHTSA proposes to collect information from representatives from the SHSOs and/or local jurisdictions, in addition to representatives from the Governors Highway Safety Association (GHSA), State Coordinators, and other relevant stakeholders. The survey will ask the representatives the following information:

- Their background, including job roles and responsibilities, which provide context for document use,
- What are their key information needs for the *Countermeasures At Work* document, including obtaining details of specific use-case examples such as locality size, implementation issues, cost, stakeholders to involve, challenges, evaluation, and outcomes,
- Opinions on the documents' structure, format, and content, which includes using a consistent question format for different information items/ sections in the document,
- Opinions about specific aspects and potential changes or improvements pertaining to examples of alternative presentation formats,
- Opinions about how the Countermeasures At Work guide would be used, what information should be included, and if stakeholders have information about good locality examples, and
- Opinions about features or topics that should be included both guides, such as the addition of figures and illustrations, and adjustments to the design of topic subsections.

Estimated Total Annual Burden: 375 hours (250 participants, averaging 90 minutes).

Comments are invited on the following:

(i) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(ii) the accuracy of the agency's estimate of the burden of the proposed information collection;

(iii) ways to enhance the quality, utility, and clarity of the information to be collected; and

(iv) ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology.

A comment to OMB is most effective if OMB receives it within 30 days of publication.

Authority: 44 U.S.C. 3506(c)(2)(A)

Issued on: May 12, 2016.

Jeff Michael,

Associate Administrator, Research and Program Development.

[FR Doc. 2016–11586 Filed 5–16–16; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2014–0076; Notice 2]

Chrysler Group, LLC, Grant of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Grant of petition.

SUMMARY: Chrysler Group, LLC (Chrysler), a wholly owned subsidiary of Fiat S.p.A., has determined that certain model year (MY) 2014 RAM 2500 and RAM 3500 trucks do not fully comply with paragraph S4.3 of Federal Motor Vehicle Safety Standard (FMVSS) No. 110, *Tire Selection and Rims and Motor Home/Recreation Vehicle Trailer Load Carrying Capacity Information for Motor Vehicles with a GVWR of 4,536 kilograms (10,000 pounds) or less, or* do not fully comply with paragraph S5.3 of FMVSS No. 120, *Tire Selection and Rims and Motor Home/Recreation Vehicle Trailer Load Carrying Capacity Information for Motor Vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds).* Chrysler filed a report dated May 6, 2014, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports* and amended that report on June 10, 2014. Chrysler then petitioned NHTSA under 49 CFR part 556 requesting a decision that the subject noncompliance is inconsequential to motor vehicle safety.

ADDRESSES: For further information on this decision contact Stuart Seigel, Office of Vehicle Safety Compliance, National Highway Traffic Safety Administration (NHTSA), telephone (202) 366–5287, facsimile (202) 366–5930.

SUPPLEMENTARY INFORMATION:

I. Chrysler's Petition: Pursuant to 49 U.S.C. 30118(d) and 30120(h) and the rule implementing those provisions at 49 CFR part 556, Chrysler has petitioned for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential to motor vehicle safety.

Notice of receipt of Chrysler's petition was published, with a 30-Day public comment period, on August 25, 2014 in the **Federal Register** (79 FR 50735). No comments were received. To view the petition and all supporting documents log onto the Federal Docket Management System (FDMS) Web site at: *http://www.regulations.gov/.* Then follow the online search instructions to locate docket number "NHTSA–2014–0076."

II. Vehicles Involved: The affected vehicles include approximately 198 MY 2014 RAM 2500 trucks and 87 MY 2014 RAM 3500 trucks that were produced from March 4, 2014 through March 6, 2014.

III. Noncompliances: Chrysler explains that due to the absence of the designated rim size and type on the certification labels required by 49 CFR part 567, the subject vehicles do not fully comply with either paragraph S4.3 of FMVSS No. 110, or paragraph S5.3 of FMVSS No. 120.

IV. Rule Text: Paragraph S4.3 of FMVSS No. 110 requires in pertinent part:

> . . . S4.3.3 Additional labeling information for vehicles other than passenger cars. Each vehicle shall show the size designation and, if applicable, the type designation of rims (not necessarily those on the vehicle) appropriate for the tire appropriate for use on that vehicle, including the tire installed as original equipment on the vehicle by the vehicle manufacturer, after each GAWR listed on the certification label required by § 567.4 or § 567.5 of this chapter. This information shall be in the English language, lettered in block capitals and numerals not less than 2.4 millimeters high and in the following format: . . .

Paragraph S5.3 of FMVSS No. 120 requires in pertinent part:

> S5.3 Each vehicle shall show the information specified in S5.3.1 and S5.3.2 and, in the case of a vehicle equipped with a non-pneumatic spare tire, the information specified in S5.3.3, in the English language, lettered in block capitals and numerals not less than 2.4 millimeters high and in the format set forth following this paragraph. This information shall appear either—
>
> (a) After each GAWR listed on the certification label required by § 567.4 or § 567.5 of this chapter; or at the option of the manufacturer,
>
> (b) On the tire information label affixed to the vehicle in the manner, location, and form described in § 567.4(b) through (f) of this chapter as appropriate of each GVWR=GAWR combination listed on the certification label.
>
> S5.3.1 *Tires.* The size designation (not necessarily for the tires on the vehicle) and the recommended cold inflation pressure for those tires such that the sum of the load ratings of the tires on each axle (when the tires' load carrying capacity at the specified pressure is reduced by dividing by 1.10, in the case of a tire subject to FMVSS No. 109) is appropriate for the GAWR as calculated in accordance with S5.1.2.
>
> S5.3.2. *Rims.* The size designation and, if applicable, the type designation of Rims (not necessarily those on the vehicle) appropriate for those tires. . . .

V. Summary of Chrysler's Analyses: Chrysler stated its belief that the subject noncompliance for the absence of the rim marking on the certification label is inconsequential to motor vehicle safety for the following reasons:

1. Tire size and pressure information is located on the Tire Inflation Pressure label which is located in the same door opening as the certification label.

a. Certification label is located on the driver door.

b. Tire placard is located on the forward edge of the driver's B-pillar.

2. Tire size and inflation pressure can be found on each tire.

3. Tire and rim information can be found in the vehicle owner's manual.

4. Rim/wheel size can be derived using the tire information printed on the Tire Inflation Pressure label or the tire sidewall information.

5. Chrysler mentioned that in a previous similar petition the agency stated, "that this noncompliance will not have an adverse effect on vehicle safety. Since rim size and type information are marked on the wheels of the vehicles, and the rim diameter can be determined from the tire size on the placard attached to some of the vehicles, the information needed to ensure that the vehicles are equipped with the proper rims and compatible tires is readily available to potential users."

6. Chrysler is not aware of any warranty claims, field reports, customer complaints, legal claims or any incidents or injuries related to the subject condition.

7. Chrysler also stated its belief that NHTSA has previously granted petition similar in nature.

With respect to the incorrect statement used to indicate that vehicles conforms to all applicable Federal Standards Chrysler states that the purpose of the statement is to communicate to a reader that a vehicle is both certified and meets applicable safety standards. The vehicles in question meet and/or exceed all applicable FMVSS required for sale in the United States.

Chrysler has additionally informed NHTSA that it has corrected the noncompliances so that all future production of these vehicles will fully comply with FMVSS Nos. 110 and 120.

In summation, Chrysler believes that the described noncompliances of the subject vehicles are inconsequential to motor vehicle safety, and that its petition, to exempt from providing recall notification of noncompliance as required by 49 U.S.C. 30118 and remedying the recall noncompliance as required by 49 U.S.C. 30120 should be granted.

NHTSA Decision

NHTSA Analysis: NHTSA has reviewed Chrysler's petition requesting a decision that the subject noncompliances are inconsequential to motor vehicle safety and has decided to moot the petition in part and grant it in part based on the following analysis.

Chrysler noted that the certification label attached to the subject vehicles, required by 49 CFR part 567, does not include the correct required statement of certification. The use of the incorrect certification statement on the certification labels is considered a violation of 49 U.S.C. 30115, *Certification* and the implementing rule at 49 CFR part 567, and not a noncompliance with a Federal Motor Vehicle Safety Standard that would require notification and remedy under of 49 U.S.C. chapter 301. Therefore, this portion of the subject petition, as filed under 49 CFR part 556, is moot.

Second, the affected vehicles (approximately 285 RAM 2500 and 3500 trucks) must comply with either FMVSS No. 110 or FMVSS No. 120 depending on the GVWR. The vehicles with a GVWR of 10,000 pounds or less do not comply with paragraph S4.3.3 of FMVSS No. 110 which requires that the rim size designation appear on the certification label for vehicles other than passenger cars. Likewise, the vehicles with a GVWR greater than 10,000 pounds, do not comply with paragraph S5.3 of FMVSS No. 120 which requires that the rim size designation appear on the certification label or at the manufacture's option on a separate tire information label.

For all affected vehicles, the rim size information can be found in the vehicle's owner's manual or on the rim itself, and the tire size information is available from multiple sources including the owner's manual, the sidewalls of the tires on the vehicle and on the tire placard or information label located on the door or door opening. The rim size can be derived using this tire information. In addition, according to Paragraph S4.4.2(b) of FMVSS No. 110 and paragraph S5.2(b) of FMVSS No. 120, the rim size designation must be marked on the rims to allow for the direct determination of the proper rim size for the vehicle.

NHTSA considers both the Ram 2500 and 3500 trucks to be light duty work trucks that are primarily used by operators experienced with and knowledgeable of their vehicles. It is highly likely that these individuals will readily be able to determine the correct rim sizing if necessary.

Therefore, although the rim size was omitted from the certification labels, the information needed to ensure that the vehicles are equipped with the proper rims and compatible tires is readily available to potential users.

NHTSA Decision: In consideration of the foregoing, NHTSA finds that Chrysler has met its burden of persuasion that the FMVSS No. 110 and FMVSS No. 120 noncompliances are inconsequential to motor vehicle safety.

Accordingly, Chrysler's petition is hereby moot in part and granted in part and Chrysler is exempted from the obligation of providing notification of, and a free remedy for, that noncompliance under 49 U.S.C. 30118 and 30120.

NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, any decision on this petition only applies to the subject vehicles that Chrysler no longer controlled at the time it determined that the noncompliance existed. However, the granting of this petition does not relieve Chrysler distributors and dealers of the prohibitions on the sale, offer for sale, or introduction or delivery for introduction into interstate commerce of the noncompliant vehicles under their control after Chrysler notified them that the subject noncompliance existed.

Authority: 49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8.

Jeffrey M. Giuseppe,

Director, Office of Vehicle Safety Compliance.

[FR Doc. 2016–11593 Filed 5–16–16; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF THE TREASURY

Open Meeting of the Advisory Committee on Risk-Sharing Mechanisms

AGENCY: Departmental Offices, U.S. Department of the Treasury.

ACTION: Notice of open meeting.

SUMMARY: This notice announces that the Department of the Treasury's Advisory Committee on Risk-Sharing Mechanisms ("Committee") will convene a meeting on Wednesday, June 1, 2016, in Room 4121, 1500 Pennsylvania Avenue NW., Washington, DC 20220, from 10:00 a.m.–1:30 p.m. Eastern Time. The meeting is open to the public, and the site is accessible to individuals with disabilities.

DATES: The meeting will be held on Wednesday, June 1, 2016, from 10:00 a.m.–4:30 p.m. Eastern Time.

ADDRESSES: The Advisory Committee on Risk-Sharing Mechanisms meeting will be held in Room 4121, Department of the Treasury, 1500 Pennsylvania Avenue NW., Washington, DC 20220. The meeting will be open to the public. Because the meeting will be held in a secured facility, members of the public who plan to attend the meeting must either:

1. Register online. Attendees may visit *http://www.cvent.com/d/sfqvj1?ct=6128d144-9ad5-45f5-910c-c7b44560aae0&RefID=TRIA+General+Registration* and fill out a secure online registration form. A valid email address will be required to complete online registration.

Note: Online registration will close at 5:00 p.m. Eastern Time on Thursday, May 26, 2016.

2. Contact the Federal Insurance Office (FIO), at (202) 622–5892, by 5:00 p.m. Eastern Time on Thursday, May 26, 2016, and provide registration information.

Requests for reasonable accommodations under Section 504 of the Rehabilitation Act should be directed to Marcia Wilson, Office of Civil Rights and Diversity, Department of the Treasury at (202) 622–8177, or *marcia.wilson@treasury.gov.*

FOR FURTHER INFORMATION CONTACT: Brett D. Hewitt, Policy Advisor, FIO, Room 1410, Department of the Treasury, 1500 Pennsylvania Avenue NW., Washington, DC 20220, at (202) 622–5892 (this is not a toll-free number). Persons who have difficulty hearing or speaking may access this number via TTY by calling the toll-free Federal Relay Service at (800) 877–8339.

SUPPLEMENTARY INFORMATION: Notice of this meeting is provided in accordance with the Federal Advisory Committee Act, 5 U.S.C. App. II 10(a)(2), through implementing regulations at 41 CFR 102–3.150.

Public Comment: Members of the public wishing to comment on the business of the Advisory Committee on Risk-Sharing Mechanisms are invited to submit written statements by any of the following methods:

Electronic Statements

- Send electronic comments to *ACRSM@treasury.gov.*

Paper Statements

- Send paper statements in triplicate to the Advisory Committee on Risk-Sharing Mechanisms, Room 1410, Department of the Treasury, 1500 Pennsylvania Avenue NW., Washington, DC 20220.

In general, the Department of the Treasury will post all statements on its Web site *http://www.treasury.gov/about/organizational-structure/offices/Pages/Federal-Insurance.aspx* without change, including any business or personal information provided such as names, addresses, email addresses, or telephone numbers. The Department of the Treasury will also make such statements available for public inspection and copying in the Department of the Treasury's Library, 1500 Pennsylvania Avenue NW., Washington, DC 20220, on official business days between the hours of 10:00 a.m. and 5:00 p.m. Eastern Time. You can make an appointment to inspect statements by telephoning (202) 622–0990. All statements, including attachments and other supporting materials, received are part of the public record and subject to public disclosure. You should submit only information that you wish to make available publicly.

Tentative Agenda/Topics for Discussion: This is a periodic meeting of the Advisory Committee on Risk-Sharing Mechanisms. In this meeting, the Committee will: Discuss the elements needed to support and encourage a robust private market for terrorism risk insurance and reinsurance, examine a comparison of international terrorism risk insurance programs, and outline next steps the Committee will take to fulfill the goals and purpose outlined in the Terrorism Risk Insurance Program Reauthorization

Act of 2015 and the Committee's charter.

Michael T. McRaith,

Director, Federal Insurance Office.

[FR Doc. 2016–11592 Filed 5–16–16; 8:45 am]

BILLING CODE 4810–25–P

DEPARTMENT OF THE TREASURY

Submission for OMB Review; Comment Request

May 12, 2016.

The Department of the Treasury will submit the following information collection requests to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, Public Law 104–13, on or after the date of publication of this notice.

DATES: Comments should be received on or before June 16, 2016 to be assured of consideration.

ADDRESSES: Send comments regarding the burden estimates, or any other aspect of the information collections, including suggestions for reducing the burden, to (1) Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Desk Officer for Treasury, New Executive Office Building, Room 10235, Washington, DC 20503, or email at *OIRA_Submission@OMB.EOP.gov* and (2) Treasury PRA Clearance Officer, 1750 Pennsylvania Ave. NW., Suite 8117, Washington, DC 20220, or email at *PRA@treasury.gov.*

FOR FURTHER INFORMATION CONTACT: Copies of the submissions may be obtained by emailing *PRA@treasury.gov,* calling (202) 622–1295, or viewing the entire information collection request at *www.reginfo.gov.*

Internal Revenue Service (IRS)

OMB Control Number: 1545–0364.

Type of Review: Reinstatement of a previously approved collection.

Title: Statement of Payments Received.

Form: Form 4669.

Abstract: Form 4669, Statement of Payments Received, is used by payers in specific situations to request relief from payment of certain required taxes. A payer who fails to withhold certain required taxes from a payee may be entitled to relief, under sections 3402(d), 3102(f)(3), 1463 or Regulations section 1.1474–4. To apply for relief, a payer must show that the payee reported the payments and paid the corresponding tax. To secure relief as described above, a payer must obtain a separate, completed Form 4669 from each payee for each year relief is requested. The data is used to verify that the income tax on the wages was paid in full. The collection of data affects business, individuals, and households.

Affected Public: Businesses or other for-profits.

Estimated Total Annual Burden Hours: 21,250.

OMB Control Number: 1545–1617.

Type of Review: Reinstatement of a previously approved collection.

Title: REG–124069–02 (Final) Section 6038—Returns Required with Respect to Controlled Foreign Partnerships; REG–118966–97 (Final) Information Reporting with Respect to Certain Foreign Partnerships.

Abstract: REG–124069–02 Treasury Regulation Sec. 1.6038–3 requires certain United States person who own interests in controlled foreign partnership to annually report information to the IRS on Form 8865. This regulation amends the reporting rules under Treasury Regulation section 1.6038–e to provide that a U.S. person must follow the filing requirements that are specified in the instructions for Form 8865 when the U.S. person must file Form 8865 and the foreign partnership completes and files Form 1065 or Form 1065–B. REG–118966–97 Section 6038 requires certain U.S. persons who own interest in controlled foreign partnerships or certain foreign corporations to annually report information to the IRS. This regulation provides reporting rules to identify foreign partnerships and foreign corporations which are controlled by U.S. persons.

Affected Public: Businesses or other for-profits.

Estimated Total Annual Burden Hours: 500.

OMB Control Number: 1545–1647.

Type of Review: Reinstatement of a previously approved collection.

Title: Revenue Procedure 2001–21.

Abstract: The revenue procedure provides for an election that allows taxpayers to treat a debt substitution, in certain circumstances, as a realization event even though it does not result in a significant modification under 26 CFR 1.1001–3.

Affected Public: Businesses or other for-profits.

Estimated Total Annual Burden Hours: 75.

OMB Control Number: 1545–2241.

Type of Review: Revision of a currently approved collection.

Title: Offshore Voluntary Disclosure Program (OVDP).

Form: Forms 14457, 14454, 14453, 14452, 14467, 14653.

Abstract: This information collection includes Form 14457, Offshore Voluntary Disclosure Letter; Form 14454, Attachment to Offshore Voluntary Disclosure Letter; Form 14453, Penalty Computation Worksheet; Form 14452, Foreign Account or Asset Statement; Form 14467, Statement on Abandoned Entities; Form 14653, Certification by U.S. Person Residing Outside of the United States for Streamlined Foreign Offshore Procedures; Form 14654, Certification by U.S. Person Residing in the United States for Streamlined Domestic Offshore Procedures; and Form 14708, Streamlined Domestic Penalty Reconsideration Request Related to Canadian Retirement Plans.

Affected Public: Individuals or households.

Estimated Total Annual Burden Hours: 757,000.

Brenda Simms,

Treasury PRA Clearance Officer.

[FR Doc. 2016–11629 Filed 5–16–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF VETERANS AFFAIRS

Advisory Committee on Cemeteries and Memorials, Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under Federal Advisory Committee Act, 38 U.S.C. App. 2 that a meeting of the Advisory Committee on Cemeteries and Memorials will be held on June 22–23, 2016, in the National Cemetery Administration's training room 104 at 1100 First Street NE., Washington, DC 20002, from 8:30 a.m. to 4:30 p.m. The meeting is open to the public.

The purpose of the Committee is to advise the Secretary of Veterans Affairs on the administration of national cemeteries, soldiers' lots and plots, the selection of new national cemetery sites, the erection of appropriate memorials, and the adequacy of Federal burial benefits.

On June 22, the Committee will receive mandatory training from the Office of General Counsel in the morning and updates on VA and National Cemetery Administration (NCA) issues by appropriate VA staff. On the morning of June 23, the Committee will receive background information on NCA projects and updates from ex-officio members.

Time will be allocated on both June 22 and June 23 to receive public comments at 1:00 p.m. Public comments are limited to three minutes each.

Individuals wishing to make oral statements before the Committee will be accommodated on a first-come, first-served basis. Individuals who speak are invited to submit 1–2 page summaries of their comments at the time of the meeting for inclusion in the official meeting record.

Members of the public may direct questions or submit written statements for review by the Committee in advance of the meeting to Ms. Robin Cooper, Designated Federal Officer, VA, NCA (43A2), 1100 1st Street NE., Washington, DC 20002, or via email at *Robin.Cooper@va.gov.* In the public's communications with the Committee, the writers must identify themselves and state the organizations, associations, or persons they represent. Because the meeting will be in a Government building, anyone attending must be prepared to show a valid photo I.D. Please allow 15 minutes before the meeting begins for this process. Any member of the public wishing to attend the meeting should contact Ms. Cooper at (202) 632–8035 or *Robin.Cooper@va.gov.*

Dated: May 11, 2016.

Jelessa Burney,

Federal Advisory Committee Management Officer.

[FR Doc. 2016–11506 Filed 5–16–16; 8:45 am]

BILLING CODE 8320–01–P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
1985

FEDERAL REGISTER

Vol. 81 Tuesday,
No. 95 May 17, 2016

Part II

Securities and Exchange Commission

Joint Industry Plan; Notice of Filing of the National Market System Plan Governing the Consolidated Audit Trail; Notices

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–77724; File No. 4–698]

Joint Industry Plan; Notice of Filing of the National Market System Plan Governing the Consolidated Audit Trail

April 27, 2016.

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I. Introduction

Pursuant to Section 11A of the Securities Exchange Act of 1934 (the "Act")[1] and Rule 608 thereunder,[2] notice is hereby given that on February 27, 2015, BATS Exchange, Inc., BATS-Y Exchange, Inc., BOX Options Exchange LLC, C2 Options Exchange, Incorporated, Chicago Board Options Exchange, Incorporated, Chicago Stock Exchange, Inc., EDGA Exchange, Inc., EDGX Exchange, Inc., Financial Industry Regulatory Authority, Inc., International Securities Exchange, LLC, ISE Gemini, LLC, Miami International Securities Exchange LLC, NASDAQ OMX BX, Inc., NASDAQ OMX PHLX LLC, The NASDAQ Stock Market LLC, National Stock Exchange, Inc., New York Stock Exchange LLC, NYSE MKT LLC, and NYSE Arca, Inc. (collectively, "SROs" or "Participants"), filed with the Securities and Exchange Commission (the "Commission" or "SEC") a National Market System Plan Governing the Consolidated Audit Trail (the "CAT NMS Plan" or "Plan").[3] On December 24, 2015, the SROs submitted an Amendment to the CAT NMS Plan.[4] A copy of the CAT NMS Plan, as modified by the Amendment, is attached as *Exhibit A* hereto. The Commission is publishing this Notice to solicit comments on the CAT NMS Plan. The Commission also is publishing notice of, and soliciting comment on, an analysis of the potential economic effects of implementing the CAT NMS Plan, as set forth in Section IV of this Notice, and the collection of information requirements in the CAT NMS Plan as required by the Paperwork Reduction Act, as set forth in Section V of this Notice.

II. Background

The Commission believes that the regulatory data infrastructure on which the SROs and the Commission currently must rely generally is outdated and inadequate to effectively oversee a complex, dispersed, and highly automated national market system. In performing their oversight responsibilities, regulators today must attempt to cobble together disparate data from a variety of existing information systems lacking in completeness, accuracy, accessibility, and/or timeliness—a model that neither supports the efficient aggregation of data from multiple trading venues nor yields the type of complete and accurate market activity data needed for robust market oversight.

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[1] 15 U.S.C. 78k–1.

[2] 17 CFR 242.608.

[3] *See* Letter from Participants to Brent J. Fields, Secretary, Commission, dated February 27, 2015. Pursuant to Rule 613, the SROs were required to file the CAT NMS Plan on or before April 28, 2013. At the SROs' request, the Commission granted exemptions to extend the deadline for filing the CAT NMS Plan to December 6, 2013, and then to September 30, 2014. *See* Securities Exchange Act Release Nos. 69060 (March 7, 2013), 78 FR 15771 (March 12, 2013); 71018 (December 6, 2013), 78 FR 75669 (December 12, 2013). The SROs filed the CAT NMS Plan on September 30, 2014 (the "Initial CAT NMS Plan"). *See* Letter from the SROs, to Brent J. Fields, Secretary, Commission, dated September 30, 2014. The CAT NMS Plan filed on February 27, 2015, was an amendment to and replacement of the Initial CAT NMS Plan (the "Amended and Restated CAT NMS Plan"). On December 24, 2015, the SROs submitted an Amendment to the Amended and Restated CAT NMS Plan. *See* Letter from Participants to Brent J. Fields, Secretary, Commission, dated December 23, 2015 (the "Amendment"). On February 9, 2016, the Participants filed with the Commission an identical, but unmarked, version of the Amended and Restated CAT NMS Plan, dated February 27, 2015, as modified by the Amendment, as well as a copy of the request for proposal issued by the Participants to solicit Bids from parties interested in serving as the Plan Processor for the consolidated audit trail. *See Exhibit A* and *infra* note 29. Unless the context otherwise requires, the "CAT NMS Plan" shall refer to the Amended and Restated CAT NMS Plan, as modified by the Amendment. The Commission notes that the application of ISE Mercury, LLC for registration as a national securities exchange was granted on January 29, 2016. *See* Securities Exchange Act Release No. 76998 (January 29, 2016), 81 FR 6066 (February 4, 2016). The Commission understands that ISE Mercury, LLC will become a Participant in the CAT NMS Plan and thus is accounted for as a Participant for purposes of this Notice.

[4] *See* Amendment, *supra* note 3.

Currently, FINRA and some of the exchanges maintain their own separate audit trail systems for certain segments of this trading activity, which vary in scope, required data elements and format. In performing their market oversight responsibilities, SRO and Commission Staffs today must rely heavily on data from these various SRO audit trails. However, as noted in Section IV.D below, there are shortcomings in the completeness, accuracy, accessibility, and timeliness of these existing audit trail systems. Some of these shortcomings are a result of the disparate nature of the systems, which make it impractical, for example, to follow orders through their entire lifecycle as they may be routed, aggregated, re-routed, and disaggregated across multiple markets. The lack of key information in the audit trails that would be useful for regulatory oversight, such as the identity of the customers who originate orders, or even the fact that two sets of orders may have been originated by the same customer, is another shortcoming.[5]

Though SRO and Commission Staff also have access to sources of market activity data other than SRO audit trails, these systems each suffer their own drawbacks. For example, data obtained from the electronic blue sheet ("EBS")[6] system and equity cleared reports[7] comprise only trade executions, and not orders or quotes. In addition, like data from existing audit trails, data from these sources lacks key elements important to regulators, such as the identity of the customer in the case of equity cleared reports. Furthermore, recent experience with implementing incremental improvements to the EBS system has illustrated some of the overall limitations of the current technologies and mechanisms used by the industry to collect, record, and make available market activity data for regulatory purposes.[8]

Recognizing these shortcomings, on July 11, 2012, the Commission adopted Rule 613 of Regulation NMS under the Act.[9] Rule 613 required the SROs to submit a national market system ("NMS") plan to create, implement, and maintain a consolidated audit trail ("CAT") that would capture customer and order event information for orders in NMS securities, across all markets, from the time of order inception through routing, cancellation, modification, or execution in a single, consolidated data source.[10] On February 27, 2015, the SROs submitted the CAT NMS Plan.[11]

The SROs also submitted a separate NMS plan and an exemptive request letter related to the CAT NMS Plan. Specifically, on September 3, 2013, the SROs filed an NMS Plan pursuant to Rule 608 governing the SROs' review, evaluation, and ultimate selection of the Plan Processor[12] for the consolidated audit trail (the "Selection Plan").[13] The Selection Plan was published for comment in the **Federal Register** on November 21, 2013 and approved by the Commission on February 21, 2014.[14] Subsequently, the SROs filed three amendments to the Selection Plan, two of which were approved by the Commission on June 17, 2015 and September 24, 2015[15] The CAT NMS Plan reflects the process approved by the Commission for reviewing, evaluating and ultimately selecting the Plan Processor, as set forth in the Selection Plan, as amended. Second, on January 30, 2015, the SROs filed an application,[16] pursuant to Rule 0–12 under the Act,[17] requesting that the Commission grant exemptions from certain requirements of Rule 613. The Commission granted the exemptions on March 1, 2016.[18] The CAT NMS Plan published for comment in this Notice reflects the exemptive relief granted by the Commission.

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[5] The Commission notes that the SROs have taken steps in recent years to update their audit trail requirements. For example, NYSE, NYSE Amex LLC (n/k/a "NYSE MKT LLC") ("NYSE Amex"), and NYSE ARCA, Inc. ("NYSE Arca") have adopted audit trail rules that coordinate with FINRA's OATS requirements. *See* Securities Exchange Act Release No. 65523 (October 7, 2011), 76 FR 64154 (October 17, 2011) (concerning NYSE); Securities Exchange Act Release No. 65524 (October 7, 2011), 76 FR 64151 (October 17, 2011) (concerning NYSE Amex); Securities Exchange Act Release No. 65544 (October 12, 2011), 76 FR 64406 (October 18, 2011) (concerning NYSE Arca). This allows the SROs to submit their data to FINRA pursuant to a Regulatory Service Agreement ("RSA"), which FINRA can then reformat and combine with OATS data. Despite these efforts, however, significant deficiencies remain. *See* Section IV.D.2, *infra*.

[6] EBSs are trading records requested by the Commission and SROs from broker-dealers that are used in regulatory investigations to identify buyers and sellers of specific securities.

[7] The Commission uses the National Securities Clearing Corporation's ("NSCC") equity cleared report for initial regulatory inquiries. This report is generated on a daily basis by the SROs and is provided to the NSCC in a database accessible by the Commission, and shows the number of trades and daily volume of all equity securities in which transactions took place, sorted by clearing member. The information provided is end-of-day data and is searchable by security name and CUSIP number.

[8] *See* Securities Exchange Act Release No. 64976 (July 27, 2011), 76 FR 46960 (August 3, 2011) ("Large Trader Release").

[9] *See* Securities Exchange Act Release No. 67457 (July 18, 2012), 77 FR 45722 (August 1, 2012) ("Adopting Release"); *see also* Securities Exchange Act Release No. 62174 (May 26, 2010), 75 FR 32556 (June 8, 2010) ("Proposing Release").

[10] *See* 17 CFR 242.613(a)(1), (c)(1), (c)(7).

[11] *See supra* note 3.

[12] As set forth in Section 1.1 of the CAT NMS Plan, the Plan Processor "means the Initial Plan Processor or any other Person selected by the Operating Committee pursuant to SEC Rule 613 and Sections 4.3(b)(i) and 6.1, and with regard to the Initial Plan Processor, the Selection Plan, to perform the CAT processing functions required by SEC Rule 613 and set forth in [the CAT NMS Plan]."

[13] *See* Securities Exchange Act Release No. 70892 (November 15, 2013), 78 FR 69910 (November 21, 2013) ("Selection Plan Notice").

[14] *See id.; see also* Securities Exchange Act Release No. 71596, 79 FR 11152 (February 27, 2014) ("Selection Plan Approval Order").

[15] *See* Securities Exchange Act Release Nos. 75192 (June 17, 2015), 80 FR 36028 (June 23, 2015) (Order Approving Amendment No. 1 to the Selection Plan); 75980 (September 24, 2015), 80 FR 58796 (September 30, 2015) (Order Approving Amendment No. 2 to the Selection Plan); Letter from SROs to Brent J. Fields, Secretary, Commission, dated March 29, 2016; *see also* Securities Exchange Act Release Nos. 74223 (February 6, 2015), 80 FR 7654 (February 11, 2015) (Notice of Amendment No. 1 to the Selection Plan); 75193 (June 17, 2015), 80 FR 36006 (June 23, 2015) (Notice of Amendment No. 2 to the Selection Plan).

[16] *See* Letter from Participants to Brent J. Fields, Secretary, Commission, dated January 30, 2015 ("Exemptive Request Letter"). Specifically, the SROs request exemptive relief from the Rule's requirements related to: (1) The reporting of Options Market Maker quotations, as required under Rule 613(c)(7)(ii) and (iv); (2) the reporting and use of the Customer-ID under Rule 613(c)(7)(i)(A), (iv)(F), (viii)(B) and 613(c)(8); (3) the reporting of the CAT-Reporter-ID, as required under Rule 613(c)(7)(i)(C), (ii)(D), (ii)(E), (iii)(D), (iii)(E), (iv)(F), (v)(F), (vi)(B), and (c)(8); (4) the linking of executions to specific subaccount allocations, as required under Rule 613(c)(7)(vi)(A); and (5) the time stamp granularity requirement of Rule 613(d)(3) for certain manual order events subject to reporting under Rule 613(c)(7)(i)(E), (ii)(C), (iii)(C) and (iv)(C). On April 3, 2015, the SROs filed a supplement related to the requested exemption for Rule 613(c)(7)(vi)(A). *See* Letter from Robert Colby, FINRA, on behalf of the SROs, to Brent J. Fields, Secretary, Commission, dated April 3, 2015 ("April 2015 Supplement"). This supplement provided examples of how the proposed relief related to allocations would operate. On September 2, 2015, the SROs filed a second supplement to the Exemptive Request Letter. *See* Letter from the SROs to Brent J. Fields, Secretary, Commission, dated September 2, 2015 ("September 2015 Supplement"). This supplement to the Exemptive Request Letter further addressed the use of an "effective date" in lieu of a "date account opened." Unless the context otherwise requires, the "Exemption Request" shall refer to the Exemptive Request Letter, as supplemented by the April 2015 Supplement and the September 2015 Supplement.

[17] 17 CFR 240.0–12.

[18] *See* Securities Exchange Act Release No. 77265 (March 1, 2016), 81 FR 11856 (March 7, 2016) ("Exemption Order"). The Commission requests comment specifically on the advantages and disadvantages of each aspect of the relief granted in the Exemption Order and whether the approaches permitted by the Exemption Order to be included in the CAT NMS Plan are preferable to those originally permitted by Rule 613. *See* Request for Comment Nos. 168–170 (Options Market Maker Quotes), 135–161 (Customer ID), 128–134 (CAT-Reporter-ID), 162–167 (Linking Order Executions to Allocations) and 114–127 (Time Stamp Granularity), *infra*.

III. Description of the Plan

As described further in this Section III of this Notice, the SROs propose to conduct the activities of the CAT through CAT NMS, LLC, a jointly owned limited liability company formed under Delaware state law; and to that end, the SROs submitted the CAT NMS, LLC's limited liability company agreement (the "LLC Agreement"), including exhibits and appendices attached thereto, to the Commission as the CAT NMS Plan. The SROs also submitted a cover letter that included a description of the CAT NMS Plan, along with the information required by Rule 608(a)(4) and (5) under the Act,[19] which is set forth below in Section III.A of this Notice as substantially prepared and submitted by the SROs. Set forth in Section III.B is a summary of additional CAT NMS Plan provisions and requests for comment.[20]

The LLC Agreement, attached hereto as *Exhibit A,* sets forth a governing structure, whereby the Operating Committee will manage the CAT NMS, LLC, and each SRO will be a member of, and have one vote within, the Operating Committee.[21] The LLC Agreement details the Operating Committee's procedures for selecting the Plan Processor,[22] who will be contracted to build the CAT, as well as the functions and activities of the Plan Processor. The LLC Agreement also sets forth the responsibilities of the Central Repository which, under the oversight of the Plan Processor, will receive, consolidate and retain the CAT Data.[23] The LLC Agreement also lists the requirements regarding the recording and reporting of CAT Data by the SROs as well as by broker-dealers, the security and confidentiality safeguards for CAT Data, surveillance requirements, fees and costs associated with operating the CAT, as well as other reporting and Technical Specifications and requirements.[24]

In Appendix C to the LLC Agreement, the SROs address the considerations listed in Rule 613(a)(1), providing information and analysis regarding the specific features, details, costs, and processes related to the CAT NMS Plan. Appendix D to the LLC Agreement provides an outline of the CAT's minimum functional and technical requirements for the Plan Processor.

A. Statement of Purpose and Request for Comment

The following statement of purpose provided herein is substantially as prepared and submitted by the SROs to the Commission.[25] Throughout the statement of purpose, the Commission has inserted requests for comment. The portion of this Notice prepared by the Commission will re-commence in Section III.B.

* * * * *

1. Background

On July 11, 2012, the Commission adopted Rule 613 [26] to require the national securities exchanges and national securities association to jointly submit a national market system plan to create, implement, and maintain a consolidated audit trail and central repository.[27] Rule 613 outlines a broad framework for the creation, implementation, and maintenance of the consolidated audit trail, including the minimum elements the Commission believes are necessary for an effective consolidated audit trail.[28]

Since the adoption of Rule 613, the Participants have worked to formulate an effective Plan. To this end, the Participants have, among other things, developed a plan for selecting the Plan Processor, solicited and evaluated Bids, and engaged diverse industry participants in the development of the Plan. Throughout, the Participants have sought to implement a process that is fair, transparent, and consistent with the standards and considerations in Rule 613.

a. The Request for Proposal and Selection Plan

On February 26, 2013, the Participants published a request for proposal ("RFP") soliciting Bids from parties interested in serving as the Plan Processor.[29] The Participants concluded that publication of an RFP was necessary to ensure that potential alternative solutions to creating the Plan and the CAT could be presented and considered, and that a detailed and meaningful cost-benefit analysis could be performed. The Participants asked any potential bidders to notify the Participants of their intent to bid by March 5, 2013. Initially, 31 firms submitted intentions to bid, four of which were Participants or affiliates of Participants. In the following weeks and months, the Participants engaged with potential bidders with respect to, among other things, the selection process, selection criteria, and potential bidders' questions and concerns.[30]

On September 4, 2013, the Participants filed with the Commission a national market system plan to govern the process for Participant review of the Bids submitted in response to the RFP, the procedure for evaluating the Bids, and, ultimately, selection of the Plan Processor (the "Selection Plan").[31] The Commission approved the Selection Plan as filed on February 21, 2014.[32] On March 21, 2014, the Participants received ten Bids in response to the RFP.

The Selection Plan divides the review and evaluation of Bids, and the selection of the Plan Processor, into various stages, certain of which have been completed to date.[33] Specifically, pursuant to the Selection Plan, the Selection Committee reviewed all Bids and determined which Bids contained sufficient information to allow the Participants to meaningfully assess and evaluate the Bids. The ten submitted Bids were deemed "Qualified Bids," [34] and so passed to the next stage, in which each Bidder presented its Bids in person to the Participants on a confidential basis. On July 1, 2014, after conducting careful analysis and comparison of the Bids, the Selection Committee voted and selected six Shortlisted Bidders, thus eliminating four Bidders from continuing in the process.[35] The Selection Committee, subject to applicable recusal provisions in the Selection Plan, will determine whether Shortlisted Bidders will be provided the opportunity to revise their Bids. After the Selection Committee further assesses and evaluates the Shortlisted Bids, including any permitted revisions to the Bids, the Selection Committee will select the Plan Processor via two rounds of voting by the Senior Voting Officers as specified in the Plan.[36]

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[19] 17 CFR 242.608(a)(4) and (a)(5).

[20] All capitalized terms not otherwise defined herein shall have the meaning ascribed to them in Rule 613, the Adopting Release, or the CAT NMS Plan, as applicable.

[21] *See* CAT NMS Plan, *supra* note 3, at Article IV.

[22] *See id.* at Article V; *see also* Order Approving Amendment No. 1 to the Selection Plan and Order Approving Amendment No. 2 to the Selection Plan, *supra* note 15.

[23] *See* CAT NMS Plan, *supra* note 3, at Article VI.

[24] *See id.*

[25] *See* CAT NMS Plan, *supra* note 3.

[26] 17 CFR 242.613.

[27] 17 CFR 242.613(a)(1).

[28] *See* Adopting Release, *supra* note 9, at 45743.

[29] *See* Appendix A of the CAT NMS Plan for the Consolidated Audit Trail National Market System Plan Request for Proposal (issued February 26, 2013, version 3.0 updated March 4, 2014). Other materials related to the RFP are *available at http://catnmsplan.com/process/.*

[30] In an effort to ensure Bidders were aware of all information provided in response to Bidders' questions related to the RFP, the Participants published answers to questions received from Bidders *available at http://catnmsplan.com/process/.*

[31] *See* Selection Plan Notice, *supra* note 13.

[32] *See* Selection Plan Approval Order, *supra* note 14.

[33] *See, e.g., id.* at 11154.

[34] A list of Qualified Bidders is *available at http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p493591.pdf.* The Commission notes that this Web site address has been updated to *http://www.catnmsplan.com/process/p493591.pdf.*

[35] The announcement and list of the Shortlisted Bidders is *available at http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p542077.pdf.* The Commission notes that this Web site address has been updated

b. Selection Plan Governance and Operations

The Selection Plan established an Operating Committee responsible for formulating, drafting, and filing with the Commission the Plan and for ensuring that the Participants' joint obligations under Rule 613 were met in a timely and efficient manner.[37] Each Participant selected one individual and one substitute to serve on the Operating Committee, with other representatives of each Participant permitted to attend Operating Committee meetings.[38] In formulating the Plan, the Participants also engaged multiple persons across a wide range of roles and expertise, engaged the consulting firm Deloitte & Touche LLP as a project manager, and engaged the law firm Wilmer Cutler Pickering Hale and Dorr LLP to serve as legal counsel in drafting the Plan. Within this structure, the Participants focused on, among other things, comparative analyses of the proposed technologies and operating models, development of funding models to support the building and operation of the CAT, and detailed review of governance considerations. Since July 2012, the Participants have held approximately 608 meetings related to the CAT.[39] These governance and organizational structures will continue to be in effect until the Commission's final approval of the Plan.[40]

c. Engagement With Industry Participants

Throughout the process of developing the Plan, the Participants consistently have been engaged in meaningful dialogue with industry participants with respect to the development of the CAT. From the outset of this process, the Participants have recognized that industry input is a critical component in the creation of the Plan. To this end, the Participants created a Web site[41] to update the public on the progress of the Plan, published requests for comment on multiple issues related to the Plan, held multiple public events to inform the industry of the progress of the CAT and to address inquiries, and formed, and later expanded, a Development Advisory Group (the "DAG") to solicit more input from a representative industry group.

The DAG conducted 43 meetings[42] to discuss, among other things, technical and operational aspects the Participants were considering for the Plan. The Participants twice issued press releases soliciting participants for the DAG, and a wide spectrum of firms was deliberately chosen to provide insight from various industry segments affected by the CAT.[43] The DAG currently consists of the Participants, and 27 diverse firms and organizations (including broker-dealers of varying sizes, the Options Clearing Corporation, a service bureau and three industry trade associations) with a variety of subject matter expertise.[44] The DAG meetings have included discussions of topics such as Options Market Maker quote reporting, requirements for capturing Customer-IDs, time stamps and clock synchronization, reporting requirements for order handling scenarios, cost and funding, error handling and corrections, and potential elimination of Rules made redundant by the CAT.[45]

In addition, the CAT Web site includes a variety of resources for the public with respect to the development of the CAT. The site contains an overview of the process, an expression of the guiding principles behind the Plan development, links to relevant regulatory actions, gap analyses comparing the requirements of Rule 613 with current reporting systems, the CAT implementation timeline, a summary of the RFP process, a set of frequently-asked questions (updated on an ongoing basis), questions for comment from the industry, industry feedback on the development of the Plan, and announcements and notices of upcoming events. This Web site, along with the requests for comments and many public events (announced on the site), have been a venue for public communication with respect to the development of the Plan.

2. Request for Exemption From Certain Requirements Under Rule 613

Following multiple discussions between the Participants and both the DAG and the Bidders, as well as among the Participants themselves, the Participants recognized that some provisions of Rule 613 would not permit certain solutions to be included in the Plan that the Participants determined advisable to effectuate the most efficient and cost-effective CAT. Consequently, on January 30, 2015, the Participants submitted to the Commission a request for exemptive relief from certain provisions of Rule 613 regarding: (1) Options Market Maker quotes; (2) Customer-IDs; (3) CAT-Reporter-IDs; (4) linking of executions to specific subaccount allocations on Allocation Reports; and (5) time stamp granularity for manual order events.[46] Specifically, the Participants requested that the Commission grant an exemption from:

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to *http://www.catnmsplan.com/pastevents/p542077.pdf.* Additionally, the Commission notes that the Selection Committee further narrowed the list of Shortlisted Bidders to three Shortlisted Bidders. *See* Participants, SROs Reduce Short List Bids from Six to Three for Consolidated Audit Trail (November 16, 2015), *available at http://www.catnmsplan.com/pastevents/catnms_release_downselect_111615.pdf.*

[36] *See* Selection Plan Approval Order, *supra* note 14, at 11154. The SEC published a notice of an amendment to the Selection Plan, which proposed to amend the Selection Plan in two ways. First, the Participants proposed to provide opportunities to accept revised Bids prior to approval of the CAT NMS Plan, and second, to allow the list of Shortlisted Bids to be narrowed prior to Commission approval of the CAT NMS Plan. *See* Notice of Amendment No. 1 to the Selection Plan, *supra* note 15. In addition, the Participants filed a second amendment to the Selection Plan, which would require the recusal of a Bidding Participant in a vote in any round by the Selection Committee to select the Plan Processor from among the Shortlisted Bidders if such Bidding Participant's Bid, a Bid submitted by an Affiliate of such Bidding Participant, or a Bid including such Bidding Participant or its Affiliate is also considered in that round. *See* Notice of Amendment No. 2 to the Selection Plan, *supra* note 15. The prior Selection Plan required recusal of a Bidding Participant under such circumstances in the vote in only the *second* round by the Selection Committee to select the Plan Processor from among the Shortlisted Bidders. The Commission notes that Amendment Nos. 1 and 2 have been approved. *See* Order Approving Amendment No. 1 to the Selection Plan and Order Approving Amendment No. 2 to the Selection Plan, *supra* note 15.

[37] *Id.*

[38] *Id.*

[39] Additional information regarding these meetings can be found at *http://catnmsplan.com/.* The Commission notes that the number of meetings in the SROs' statement is as of February 27, 2015. *See* CAT NMS Plan, *supra* note 3.

[40] *See* Selection Plan Approval Order, *supra* note 14, at 11155.

[41] The Web site is *available at http://catnmsplan.com/.*

[42] In addition to these meetings, DAG subcommittee meetings also were held. The Commission notes that the number of meetings in the SROs' statement is as of February 27, 2015. *See* CAT NMS Plan, *supra* note 3.

[43] For a list of DAG members, *see* Summary of the Consolidated Audit Trail Initiative at 13 (Jan. 2015), *available at http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p571933.pdf.* The Commission notes that the list of DAG members appears on page 6 of the linked document, which is dated May 2015.

[44] The list of current DAG members is *available at http://catnmsplan.com/PastEvents/.*

[45] *See, e.g.,* Summary of the Consolidated Audit Trail Initiative, *supra* note 43, at 14.

[46] *See* Exemptive Request Letter, *supra* note 16.

Rule 613(c)(7)(ii) and (iv) for Options Market Makers with regard to their options quotes;

Rule 613(c)(7)(i)(A), (c)(7)(iv)(F), (c)(7)(viii)(B) and (c)(8) which relate to the requirements for Customer-IDs;

Rule 613(c)(7)(i)(C), (c)(7)(ii)(D), (c)(7)(ii)(E), (c)(7)(iii)(D), (c)(7)(iii)(E), (c)(7)(iv)(F), (c)(7)(v)(F), (c)(7)(vi)(B) and (c)(8) which relate to the requirements for CAT-Reporter-IDs;

Rule 613(c)(7)(vi)(A), which requires CAT Reporters to record and report the account number of any subaccounts to which the execution is allocated; and

The millisecond time stamp granularity requirement in Rule 613(d)(3) for certain manual order events subject to time stamp reporting under Rules 613(c)(7)(i)(E), 613(c)(7)(ii)(C), 613(c)(7)(iii)(C), and 613(c)(7)(iv)(C).

The Participants believe that the requested relief is critical to the development of a cost-effective approach to the CAT.[47]

3. Requirements Pursuant to Rule 608(a)

a. Description of Plan

Rule 613 requires the Participants to "jointly file . . . a national market system plan to govern the creation, implementation, and maintenance of a consolidated audit trail and Central Repository."[48] The purpose of the Plan, and the creation, implementation and maintenance of a comprehensive audit trail for the U.S. securities market described therein, is to "substantially enhance the ability of the SROs and the Commission to oversee today's securities markets and fulfill their responsibilities under the federal securities laws."[49] It "will allow for the prompt and accurate recording of material information about all orders in NMS securities, including the identity of customers, as these orders are generated and then routed throughout the U.S. markets until execution, cancellation, or modification. This information will be consolidated and made readily available to regulators in a uniform electronic format."[50] The SROs note that the following summarizes various provisions of the Plan, which is set forth in full as *Exhibit A* to this Notice.

(1) LLC Agreement

The Participants propose to conduct the activities related to the CAT in a Delaware limited liability company pursuant to a limited liability company agreement, entitled the Limited Liability Company Agreement of CAT NMS, LLC ("Company"). The Participants will jointly own on an equal basis the Company. The Company will create, implement and maintain the CAT. The limited liability company agreement ("LLC Agreement") itself, including its appendices, is the proposed Plan, which would be a national market system plan as defined in Rule 600(b)(43) of NMS.

(2) Participants

Each national securities exchange and national securities association currently registered with the Commission would be a Participant in the Plan. The names and addresses of each Participant are set forth in Exhibit A to the Plan. Article III of the Plan provides that any entity approved by the Commission as a national securities exchange or national securities association under the Exchange Act after the Effective Date may become a Participant by submitting to the Company a completed application in the form provided by the Company and satisfying each of the following requirements: (1) Executing a counterpart of the LLC Agreement as then in effect; and (2) paying a fee to the Company in an amount determined by a Majority Vote of the Operating Committee as fairly and reasonably compensating the Company and the Participants for costs incurred in creating, implementing and maintaining the CAT (including such costs incurred in evaluating and selecting the Initial Plan Processor and any subsequent Plan Processor) and for costs the Company incurs in providing for the prospective Participant's participation in the Company, including after consideration of certain factors identified in Section 3.3(b) of the Agreement ("Participation Fee"). The amendment of the Plan reflecting the admission of a new Participant will be effective only when: (1) It is approved by the SEC in accordance with Rule 608 or otherwise becomes effective pursuant to Rule 608; and (2) the prospective Participant pays the Participation Fee.

A number of factors are relevant to the determination of a Participation Fee. Such factors include: (1) The portion of costs previously paid by the Company for the development, expansion and maintenance of the CAT which, under GAAP, would have been treated as capital expenditures and would have been amortized over the five years preceding the admission of the prospective Participant; (2) an assessment of costs incurred and to be incurred by the Company for modifying the CAT or any part thereof to accommodate the prospective Participant, which costs are not otherwise required to be paid or reimbursed by the prospective Participant; (3) Participation Fees paid by other Participants admitted as such after the Effective Date; (4) elapsed time from the Effective Date to the anticipated date of admittance of the prospective Participant; and (5) such other factors, if any, as may be determined to be appropriate by the Operating Committee and approved by the Commission. In the event that the Company and a prospective Participant do not agree on the amount of the Participation Fee, such amount will be subject to review by the SEC pursuant to Section 11A(b)(5) of the Exchange Act.

An applicant for participation in the Company may apply for limited access to the CAT System for planning and testing purposes pending its admission as a Participant by submitting to the Company a completed Application for Limited Access to the CAT System in a form provided by the Company, accompanied by payment of a deposit in the amount established by the Company, which will be applied or refunded as described in such application. To be eligible to apply for such limited access, the applicant must have been approved by the SEC as a national securities exchange or national securities association under the Exchange Act but the applicant has not yet become a Participant of the Plan, or the SEC must have published such applicant's Form 1 Application or From [sic] X–15AA–1 Application to become a national securities exchange or a national securities association, respectively.

All Company Interests will have the same rights, powers, preferences and privileges and be subject to the same restrictions, qualifications and limitations. Once admitted, each Participant will be entitled to one vote on any matter presented to Participants for their consideration and to participate equally in any distribution made by the Company (other than a distribution made pursuant to Section 10.2 of the Plan). Each Participant will have a Company Interest equal to that of each other Participant.

Article III also describes a Participant's ability to Transfer a Company Interest. A Participant may only Transfer any Company Interest to a national securities exchange or national securities association that succeeds to the business of such Participant as a result of a merger or consolidation with such Participant or the Transfer of all or substantially all of the assets or equity of such Participant ("Permitted Transferee"). A Participant may not Transfer any Company Interest to a Permitted Transferee unless: (1) Such Permitted Transferee executes a counterpart of the Plan; and (2) the amendment to the Plan reflecting the Transfer is approved by the SEC in accordance with Rule 608 or otherwise becomes effective pursuant to Rule 608.

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[47] The Commission notes the Participants' request for exemptive relief was granted on March 1, 2016. *See* Exemption Order, *supra* note 18.

[48] 17 CFR 242.613(a)(1).

[49] *See* Adopting Release, *supra* note 9, at 45726.

[50] *Id.* Note that the Plan also includes certain recording and reporting obligations for OTC Equity Securities.

In addition, Article III addresses the voluntary resignation and termination of participation in the Plan. Any Participant may voluntarily resign from the Company, and thereby withdraw from and terminate its right to any Company Interest, only if: (1) A Permitted Legal Basis for such action exists; and (2) such Participant provides to the Company and each other Participant no less than thirty days prior to the effective date of such action written notice specifying such Permitted Legal Basis, including appropriate documentation evidencing the existence of such Permitted Legal Basis, and, to the extent applicable, evidence reasonably satisfactory to the Company and other Participants that any orders or approvals required from the SEC in connection with such action have been obtained. A validly withdrawing Participant will have the rights and obligations discussed below with regard to termination of participation.

A Participant's participation in the Company, and its right to any Company Interest, will terminate as of the earliest of: (1) The effective date specified in a valid resignation notice; (2) such time as such Participant is no longer registered as a national securities exchange or national securities association; or (3) the date of termination for failure to pay fees. With regard to the payment of fees, each Participant is required to pay all fees or other amounts required to be paid under the Plan within thirty days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated) (the "Payment Date"). If a Participant fails to make such a required payment by the Payment Date, any balance in the Participant's Capital Account will be applied to the outstanding balance. If a balance still remains with respect to any such required payment, the Participant will pay interest on the outstanding balance from the Payment Date until such fee or amount is paid at a per annum rate equal to the lesser of: (1) The Prime Rate plus 300 basis points; or (2) the maximum rate permitted by applicable law. If any such remaining outstanding balance is not paid within thirty days after the Payment Date, the Participants will file an amendment to the Plan requesting the termination of the participation in the Company of such Participant, and its right to any Company Interest, with the SEC. Such amendment will be effective only when it is approved by the SEC in accordance with Rule 608 or otherwise becomes effective pursuant to Rule 608.

From and after the effective date of termination of a Participant's participation in the Company, profits and losses of the Company will cease to be allocated to the Capital Account of the Participant. A terminated Participant will be entitled to receive the balance in its Capital Account as of the effective date of termination adjusted for profits and losses through that date, payable within ninety days of the effective date of termination, and will remain liable for its proportionate share of costs and expenses allocated to it for the period during which it was a Participant, for obligations under Section 3.8(c) regarding the return of amounts previously distributed (if required by a court of competent jurisdiction), for its indemnification obligations pursuant to Section 4.1, and for obligations under Section 9.6 regarding confidentiality, but it will have no other obligations under the Plan following the effective date of termination. The Plan will be amended to reflect any termination of participation in the Company of a Participant, provided that such amendment will be effective only when it is approved by the SEC in accordance with Rule 608 or otherwise becomes effective pursuant to Rule 608.

Request for Comment

1. Do Commenters believe that the process for a national securities exchange and national securities association to become a Participant pursuant to and under the CAT NMS Plan is clearly and adequately set forth in the CAT NMS Plan? Do Commenters believe that the process for, and the circumstances under which a Participant could voluntarily terminate its participation as a Participant to the CAT NMS Plan is clearly and adequately set forth in the CAT NMS Plan? If not, what additional details should be provided? Do Commenters believe that these two processes are appropriate and reasonable?

2. Do Commenters believe that the process and enumerated factors for determining the Participation Fee are clear and reasonable under the CAT NMS Plan? If not, what additional modifications, if any, should be considered in the Participation Fee determination process?

3. Are restrictions on the transfer of a Company Interest appropriate and reasonable? If not, why not? What additional limitations or factors, if any, should be imposed on such transfers? Please explain.

4. Do Commenters believe that permitting the termination of a Participant that continues to be a registered national securities exchange or national securities association from participation in the Company is an appropriate recourse for failure to pay Participant fees? If not, can Commenters recommend an alternative remedy? Please explain.

5. Are there other circumstances that should trigger termination of participation in the Company? If yes, what are they?

(3) Management

Article IV of the Plan establishes the overall governance structure for the management of the Company. Specifically, the Participants propose that the Company be managed by an Operating Committee.[51]

The Operating Committee will consist of one voting member representing each Participant and one alternate voting member representing each Participant who will have a right to vote only in the absence of the Participant's voting member of the Operating Committee. Each of the voting and alternate voting members of the Operating Committee will be appointed by the Participant that he or she represents, will serve at the will of the Participant appointing such member and will be subject to the confidentiality obligations of the Participant that he or she represents as set forth in Section 9.6. One individual may serve as the voting member of the Operating Committee for multiple Affiliated Participants, and such individual will have the right to vote on behalf of each such Affiliated Participant.

The Operating Committee will elect, by Majority Vote, one of its members to act as Chair for a term of two years. No Person may serve as Chair for more than two successive full terms, and no Person then appointed to the Operating Committee by a Participant that then serves, or whose Affiliate then serves, as the Plan Processor will be eligible to serve as the Chair. The Chair will preside at all meetings of the Operating Committee, designate a Person to act as Secretary, and perform such other duties and possess such other powers as the Operating Committee may from time to time prescribe. The Chair will not be entitled to a tie-breaking vote at any meeting of the Operating Committee.

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[51] The Operating Committee will manage the Company except for situations in which the approval of the Participants is required by the Plan or by non-waivable provisions of applicable law.

Each of the members of the Operating Committee, including the Chair, will be authorized to cast one vote for each Participant that he or she represents on all matters voted upon by the Operating Committee. Action of the Operating Committee will be authorized by Majority Vote (except under certain designated circumstances), subject to the approval of the SEC whenever such approval is required under the Exchange Act and the rules thereunder. For example, the Plan specifically notes that a Majority Vote of the Operating Committee is required to: (1) Select the Chair; (2) select the members of the Advisory Committee (as described below); (3) interpret the Plan (unless otherwise noted therein); (4) approve any recommendation by the Chief Compliance Officer pursuant to Section 6.2(a)(v)(A); (5) determine to hold an Executive Session of the Operating Committee; (6) determine the appropriate funding-related policies, procedures and practices consistent with Article XI; and (7) any other matter specified elsewhere in the Plan (which includes the Appendices to the Plan) as requiring a vote, approval or other action of the Operating Committee (other than those matters expressly requiring a Supermajority Vote or a different vote of the Operating Committee).

Article IV requires a Supermajority Vote of the Operating Committee, subject to the approval of the SEC when required, for the following: (1) Selecting a Plan Processor, other than the Initial Plan Processor selected in accordance with Article V of the Plan; (2) terminating the Plan Processor without cause in accordance with Section 6.1(p); (3) approving the Plan Processor's appointment or removal of the Chief Information Security Officer, Chief Compliance Officer, or any Independent Auditor in accordance with Section 6.1(b); (4) entering into, modifying or terminating any Material Contract (if the Material Contract is with a Participant or an Affiliate of a Participant, such Participant and Affiliated Participant will be recused from any vote); (5) making any Material Systems Change; (6) approving the initial Technical Specifications or any Material Amendment to the Technical Specifications proposed by the Plan Processor; (7) amending the Technical Specifications on its own motion; and (8) any other matter specified elsewhere in the Plan (which includes the Appendices to the Plan) as requiring a vote, approval or other action of the Operating Committee by a Supermajority Vote.

A member of the Operating Committee or any Subcommittee thereof (as discussed below) shall recuse himself or herself from voting on any matter under consideration by the Operating Committee or such Subcommittee if such member determines that voting on such matter raises a Conflict of Interest. In addition, if the members of the Operating Committee or any Subcommittee (excluding the member thereof proposed to be recused) determine by Supermajority Vote that any member voting on a matter under consideration by the Operating Committee or such Subcommittee raises a Conflict of Interest, such member shall be recused from voting on such matter. No member of the Operating Committee or any Subcommittee will be automatically recused from voting on any matter except matters involving Material Contracts as discussed in the prior paragraph, as otherwise specified in the Plan, and as follows: (1) If a Participant is a Bidding Participant whose Bid remains under consideration, members appointed to the Operating Committee or any Subcommittee by such Participant or any of its Affiliated Participants will be recused from any vote concerning: (a) Whether another Bidder may revise its Bid; (b) the selection of a Bidder; or (c) any contract to which such Participant or any of its Affiliates would be a party in its capacity as Plan Processor; and (2) if a Participant is then serving as Plan Processor, is an Affiliate of the Person then serving as Plan Processor, or is an Affiliate of an entity that is a Material Subcontractor to the Plan Processor, then in each case members appointed to the Operating Committee or any Subcommittee by such Participant or any of its Affiliated Participants shall be recused from any vote concerning: (a) The proposed removal of such Plan Processor; or (b) any contract between the Company and such Plan Processor.

Article IV also addresses meetings of the Operating Committee.[52] Meetings of the Operating Committee may be attended by each Participant's voting Representative and its alternate voting Representative and by a maximum of two nonvoting Representatives of each Participant, by members of the Advisory Committee, by the Chief Compliance Officer, by other Representatives of the Company and the Plan Processor, by Representatives of the SEC and by such other Persons that the Operating Committee may invite to attend. The Operating Committee, however, may, where appropriate, determine to meet in Executive Session during which only voting members of the Operating Committee will be present. The Operating Committee, however, may invite other Representatives of the Participants, of the Company, of the Plan Processor (including the Chief Compliance Officer and the Chief Information Security Officer) or the SEC, or such other Persons that the Operating Committee may invite to attend, to be present during an Executive Session. Any determination of the Operating Committee to meet in an Executive Session will be made upon a Majority Vote and will be reflected in the minutes of the meeting. In addition, any Person that is not a Participant but for which the SEC has published a Form 1 Application or Form X–15AA–1 to become a national securities exchange or national securities association, respectively, will be permitted to appoint one primary Representative and one alternate Representative to attend regularly scheduled Operating Committee meetings in the capacity of a non-voting observer, but will not be permitted to have any Representative attend a special meeting, emergency meeting or meeting held in Executive Session of the Operating Committee.

The Operating Committee may, by Majority Vote, designate by resolution one or more Subcommittees it deems necessary or desirable in furtherance of the management of the business and affairs of the Company. For any Subcommittee, any member of the Operating Committee who wants to serve thereon may so serve. If Affiliated Participants have collectively appointed one member to the Operating Committee to represent them, then such Affiliated Participants may have only that member serve on the Subcommittee or may decide not to have only that collectively appointed member serve on the Subcommittee. Such member may designate an individual other than himself or herself who is also an employee of the Participant or Affiliated Participants that appointed such member to serve on a Subcommittee in lieu of the particular member. Subject to the requirements of the Plan and non-waivable provisions of Delaware law, a Subcommittee may exercise all the powers and authority of the Operating Committee in the management of the business and affairs of the Company as so specified in the resolution of the

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[52] Article IV also addresses, among other things, different types of Operating Committee meetings (regular, special and emergency), frequency of such meetings, how to call such meetings, the location of the meetings, the role of the Chair, and notice regarding such meetings.

Operating Committee designating such Subcommittee.

Article IV requires that the Operating Committee maintain a Compliance Subcommittee for the purpose of aiding the Chief Compliance Officer as necessary, including with respect to issues involving: (1) The maintenance of the confidentiality of information submitted to the Plan Processor or Central Repository pursuant to Rule 613, applicable law, or the Plan by Participants and Industry Members; (2) the timeliness, accuracy, and completeness of information submitted pursuant to Rule 613, applicable law or the Plan by Participants and Industry Members; and (3) the manner and extent to which each Participant is meeting its obligations under Rule 613, Section 3.11, and as set forth elsewhere in the Plan and ensuring the consistency of the Plan's enforcement as to all Participants.

Article IV also sets forth the requirements for the formation and functioning of an Advisory Committee, which will advise the Participants on the implementation, operation and administration of the Central Repository, including possible expansion of the Central Repository to other securities and other types of transactions.

Article IV describes the composition of the Advisory Committee. No member of the Advisory Committee may be employed by or affiliated with any Participant or any of its Affiliates or facilities. The Operating Committee will select one member from representatives of each of the following categories to serve on the Advisory Committee on behalf of himself or herself individually and not on behalf of the entity for which the individual is then currently employed: (1) A broker-dealer with no more than 150 Registered Persons; (2) a broker-dealer with at least 151 and no more than 499 Registered Persons; (3) a broker-dealer with 500 or more Registered Persons; (4) a broker-dealer with a substantial wholesale customer base; (5) a broker-dealer that is approved by a national securities exchange: (a) To effect transactions on an exchange as a specialist, market maker or floor broker; or (b) to act as an institutional broker on an exchange; (6) a proprietary-trading broker-dealer; (7) a clearing firm; (8) an individual who maintains a securities account with a registered broker or dealer but who otherwise has no material business relationship with a broker or dealer or with a Participant; (9) a member of academia with expertise in the securities industry or any other industry relevant to the operation of the CAT System; (10) an institutional investor trading on behalf of a public entity or entities; (11) an institutional investor trading on behalf of a private entity or entities; and (12) an individual with significant and reputable regulatory expertise. The members selected to represent categories (1) through (12) above must include, in the aggregate, representatives of no fewer than three broker-dealers that are active in the options business and representatives of no fewer than three broker-dealers that are active in the equities business. In addition, upon a change in employment of any such selected member, a Majority Vote of the Operating Committee will be required for such member to be eligible to continue to serve on the Advisory Committee. Furthermore, the SEC's Chief Technology Officer (or the individual then currently employed in a comparable position providing equivalent services) will serve as an observer of the Advisory Committee (but not be a member). The members of the Advisory Committee will have a term of three years.[53]

Members of the Advisory Committee will have the right to attend meetings of the Operating Committee or any Subcommittee, to receive information concerning the operation of the Central Repository, and to submit their views to the Operating Committee or any Subcommittee on matters pursuant to the Plan prior to a decision by the Operating Committee on such matters. A member of the Advisory Committee will not have a right to vote on any matter considered by the Operating Committee or any Subcommittee. In addition, the Operating Committee or any Subcommittee may meet in Executive Session if the Operating Committee or Subcommittee determines by Majority Vote that such an Executive Session is advisable.[54] Although members of the Advisory Committee will have the right to receive information concerning the operation of the Central Repository, the Operating Committee retains the authority to determine the scope and content of information supplied to the Advisory Committee, which will be limited to that information that is necessary and appropriate for the Advisory Committee to fulfill its functions. Any information received by members of the Advisory Committee will remain confidential unless otherwise specified by the Operating Committee.

Article IV also describes the appointment of Officers for the Company. Specifically, the Chief Compliance Officer and the Chief Information Security Officer, each of whom will be employed solely by the Plan Processor and neither of whom will be deemed or construed in any way to be an employee of the Company, will be Officers of the Company. Neither such Officer will receive or be entitled to any compensation from the Company or any Participant by virtue of his or her service in such capacity (other than if a Participant is then serving as the Plan Processor, compensation paid to such Officer as an employee of such Participant). Each such Officer will report directly to the Operating Committee. The Chief Compliance Officer will work on a regular and frequent basis with the Compliance Subcommittee and/or other Subcommittees as may be determined by the Operating Committee. Except to the extent otherwise provided in the Plan, including Section 6.2, each such Officer will have such fiduciary and other duties with regard to the Plan Processor as imposed by the Plan Processor on such individual by virtue of his or her employment by the Plan Processor.

In addition, the Plan Processor will inform the Operating Committee of the individual who has direct management responsibility for the Plan Processor's performance of its obligations with respect to the CAT. Subject to approval by the Operating Committee of such individual, the Operating Committee will appoint such individual as an Officer. In addition, the Operating Committee by Supermajority Vote may appoint other Officers as it shall from time to time deem necessary. Any Officer appointed pursuant to Section 4.6(b) will have only such duties and responsibilities as set forth in the Plan, or as the Operating Committee shall from time to time expressly determine. No such Officer shall have any authority to bind the Company (which authority is vested solely in the Operating Committee) or be an employee of the Company, unless in each case the Operating Committee, by Supermajority Vote, expressly determines otherwise. No person subject to a "statutory disqualification" (as defined in Section 3(a)(39) of the Exchange Act) may serve as an Officer. It is the intent of the Participants that the Company have no employees.

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[53] Four of the initial twelve members of the Advisory Committee will have an initial term of one year, and another four of the initial twelve members of the Advisory Committee will have an initial term of two years.

[54] The Operating Committee may solicit and consider views on the operation of the Central Repository in addition to those of the Advisory Committee.

Request for Comment

6. Do Commenters believe that the organizational, governance and/or managerial structure of CAT NMS, LLC is in the public interest? Why or why not?

7. Do Commenters believe that the organizational, governance, and/or managerial structure set forth in the CAT NMS Plan, including the role of the Operating Committee, is appropriate and reasonable? If not, please explain.

8. The CAT NMS Plan specifies the corporate actions that require a Majority Vote and the corporate actions that require a Supermajority Vote. Do Commenters believe that such voting procedures are appropriate and reasonable? Should any corporate actions require a higher or lower voting threshold than specified in the Plan? Are there any corporate actions that should require a Supermajority Vote? Please explain.

9. Do Commenters believe that the CAT NMS Plan should explicitly or more clearly specify who should determine whether a systems change or amendment is "material"? If so, who? Please explain.

10. Do Commenters believe that two successive full terms is an appropriate and reasonable term limit for a Person to serve as chair of the Operating Committee? If not, please explain.

11. Section 1.1 defines Conflict of Interest to mean that the interest of a Participant (*e.g.,* commercial, reputational, regulatory, or otherwise) in the matter that is subject to the vote; (a) interferes, or would be reasonably likely to interfere with that Participant's objective consideration of the matter; and (b) is, or is reasonably likely to be, inconsistent with the purpose and objectives of the Company, and the CAT, taking into account all relevant considerations, including whether a Participant that may otherwise have a conflict of interest has established appropriate safeguards to eliminate such conflicts of interest and taking into account the other guiding principles set forth in the LLC Agreement. Do Commenters believe this definition of "Conflict of Interest" is appropriate and reasonable? Please explain.

12. Do Commenters believe that the definition of Conflict of Interest of the CAT NMS Plan properly reflects the business interests of each Participant and the Operating Committee? If not, please explain. Do Commenters believe that the CAT NMS Plan governing procedures on Conflicts of Interest and recusals contained in Section 4.3(d) of the CAT NMS Plan, reasonably and adequately address Conflicts of Interest? If not, please explain. Are there other conflicts of interest that may arise for any Participant that are not addressed in the CAT NMS Plan definitions or governing procedures? If so, what?

13. Is the CAT NMS Plan clear and reasonable regarding whether it permits the Operating Committee to delegate the authority to vote on matters to a Subcommittee? If so, in what circumstances? Are there any circumstances in which a Subcommittee would or should be prohibited from voting in place of the Operating Committee? Please explain.

14. Do Commenters believe that the Advisory Committee structure and provisions set forth in the CAT NMS Plan are appropriate and reasonable? Is the size of the Advisory Committee as contemplated by the Plan appropriate and reasonable? Are the Advisory Committee member categories reasonable and adequately representative of entities impacted by the CAT NMS Plan? Would expanding membership on the Advisory Committee to any additional types of entities enhance the quality of the input it would provide to the Operating Committee? Please explain.

15. Is the mechanism for determining who serves on the Advisory Committee (*i.e.,* selection by the Operating Committee) appropriate and reasonable? Should Participants be required to publicly solicit Advisory Committee membership interest? Should the Advisory Committee be able to self-nominate replacement candidates? Please explain.

16. Do Commenters believe that the CAT NMS Plan's requirement that Advisory Committee members serve on the Advisory Committee in their personal capacities, and that the Operating Committee members serve on the Operating Committee as representatives of their employers who are the Plan Participants create different incentives for members of the Advisory Committee and members of the Operating Committee? If so, in what ways? Do Commenters believe that these differing incentives would impact the regulatory objective of the CAT? If so, in what ways?

17. The CAT NMS Plan outlines the size, tenure and membership categories of the Advisory Committee members. Do Commenters believe there are any additional or alternative factors that should be taken into consideration in structuring the Advisory Committee that would benefit the operation of the CAT? If so, what are those additional or alternative factors? How would these factors benefit the operation of the CAT?

18. Are the roles and responsibilities of the Advisory Committee clearly and adequately set forth in the CAT NMS Plan? If not, why not? Should additional details on these roles and responsibilities be provided? If so, what additional details should be provided?

19. Are there any alternatives for involvement by the Advisory Committee that could increase the effectiveness of the Advisory Committee? For example, should the Advisory Committee be given a vote in connection with decisions regarding the CAT NMS Plan, equivalent to the vote each Participant has? If so, please specifically identify the alternatives for involvement and how those alternatives could increase the effectiveness of the CAT.

20. Do Commenters believe that the Advisory Committee is structured in a way that would allow industry to provide meaningful input on the implementation, operation, and administration of the CAT? If not, please explain and/or provide specific suggestions for improving the Advisory Committee structure. Should additional authority be given to the Advisory Committee, for example allowing it to initiate its own recommendations? Should additional mechanisms through which the industry or others could provide input be included in the CAT NMS Plan?[55] Should the Operating Committee be required to respond to the Advisory Committee's views, formally or informally, in advance of or following a decision by the Operating Committee? Should the Operating Committee be required to include Advisory Committee views in filings with the Commission? Please explain.

21. Do Commenters believe that the Plan's provision that prohibits the Advisory Committee from attending any Executive Session of the Operating Committee is appropriate and reasonable?

22. Do Commenters believe that the CAT NMS Plan adequately sets forth provisions regarding the scope, authority, and duties of the Officers of the CAT, as well as the scope and authority of the Plan Processor generally? If not, what further provisions should the CAT NMS Plan set forth with respect to Officers and the Plan Processor and why?

23. Do Commenters believe that the Operating Committee and the proposed CAT NMS Plan governance structure would ensure effective corporate governance, process and action? Why or why not?

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[55] *See* Section IV.E.4, *infra*, for additional requests for comment on the Advisory Committee.

24. The CAT NMS Plan provides that emergency meetings of the Operating Committee may be called at the request of two or more Participants, and may be held as soon as practical after such a meeting is called. Do Commenters believe that there should be a different method for the Operating Committee to meet and take action in the event of an emergency? Should the CAT NMS Plan denote certain emergency situations in which the Operating Committee must be required to take action on an expedited basis? If so, what time period would be reasonable to require action by the Operating Committee and what mechanisms or processes should the Operating Committee be required to follow?

25. What, if any, impact on the Operating Committee's governance and voting do Affiliated Participant groups have? Do Commenters believe that the Operating Committee's governance and voting provisions set forth in the CAT NMS Plan, including the definitions of Supermajority Vote and Majority Vote, are appropriate and reasonable in light of these Affiliated Participant groups? What, if any, additional governance and voting provisions or protections should be included? Is there an alternative model for voting rights that would be more appropriate and reasonable, for example distributing votes using a measure other than exchange licenses?

26. Do Commenters believe the use of Executive Session is appropriate and reasonable? Is a Majority Vote the appropriate mechanism for the Operating Committee to go into Executive Session? Should the CAT NMS Plan specify particular scenarios for which an Executive Session is or is not appropriate?

27. Do Commenters believe that the provisions in the CAT NMS Plan regarding the mechanics of voting by the Operating Committee, the Selection Committee, or other entities are appropriate and reasonable? Does the CAT NMS Plan include sufficient detail on when voting should be carried out openly (*e.g.*, in the presence of other attendees at a committee meeting) as opposed to when voting may be conducted by secret ballot or by some other confidential method? What are the advantages and disadvantages of different voting methodologies? Would particular actions or decisions regarding CAT be better suited to one voting methodology over others? Please explain.

28. Are there any other matters relating to the operation and administration of the Plan that should be included in the Plan for the Commission's consideration? If so, please identify such matters and explain why and how they should be addressed in the Plan.

(4) Initial Plan Processor Selection

Article V of the Plan sets forth the process for the Participants' evaluation of Bids and the selection process for narrowing down the Bids and choosing the Initial Plan Processor. The initial steps in the evaluation and selection process were and will be performed pursuant to the Selection Plan; the final two rounds of evaluation and voting, as well as the final selection of the Initial Plan Processor, will be performed pursuant to the Plan.[56]

As discussed above, the Selection Committee has selected the Shortlisted Bids pursuant to the Selection Plan. After reviewing the Shortlisted Bids, the Participants have identified the optimal proposed solutions for the CAT and, to the extent possible, included such solutions in the Plan.[57] The Selection Committee will determine, by majority vote, whether Shortlisted Bidders will have the opportunity to revise their Bids. To reduce potential conflicts of interest, no Bidding Participant may vote on whether a Shortlisted Bidder will be permitted to revise its Bid if a Bid submitted by or including the Participant or an Affiliate of the Participant is a Shortlisted Bid. The Selection Committee will review and evaluate all Shortlisted Bids, including any permitted revisions submitted by Shortlisted Bidders. In performing this review and evaluation, the Selection Committee may consult with the Advisory Committee and such other Persons as the Selection Committee deems appropriate, which may include the DAG until the Advisory Committee is formed.

After receipt of any permitted revisions, the Selection Committee will select the Initial Plan Processor from the Shortlisted Bids in two rounds of voting where each Participant has one vote via its Voting Senior Officer in each round.[58] No Bidding Participant, however, will be entitled to vote in any round if the Participant's Bid, a Bid submitted by an Affiliate of the Participant, or a Bid including the Participant or an Affiliate of the Participant is considered in such round.[59] In the first round, each Voting Senior Officer, subject to the recusal provision in Section 5.2(e)(ii), will select a first and second choice, with the first choice receiving two points and the second choice receiving one point. The two Shortlisted Bids receiving the highest cumulative scores in the first round will advance to the second round.[60] In the event of a tie, the tie will be broken by assigning one point per vote to the tied Shortlisted Bids, and the Shortlisted Bid with the most votes will advance. If this procedure fails to break the tie, a revote will be taken on the tied Bids with each vote receiving one point. If the tie persists, the Participants will identify areas for discussion, and revotes will be taken until the tie is broken.

Once two Shortlisted Bids have been chosen, the Voting Senior Officers of the Participants (other than those subject to recusal) will vote for a single Shortlisted Bid from the final two to determine the Initial Plan Processor. If the tie persists, the Participants will identify areas for discussion and, following these discussions, revotes will be taken until the tie is broken. As set forth in Article VI of the Plan, following the selection of the Initial Plan Processor, the Participants will file with the Commission a statement identifying the Initial Plan Processor and including the information required by Rule 608.

(5) Functions and Activities of CAT System

A. Plan Processor

Article VI describes the responsibilities of the selected Plan Processor. The Company, under the direction of the Operating Committee, will enter into one or more agreements with the Plan Processor obligating the Plan Processor to perform the functions and duties contemplated by the Plan to be performed by the Plan Processor, as well as such other functions and duties the Operating Committee deems necessary or appropriate.

As set forth in the Plan, the Plan Processor is required to develop and, with the prior approval of the Operating Committee, implement policies, procedures, and control structures related to the CAT System that are consistent with Rule 613(e)(4), Appendix C and Appendix D. The Plan

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[56] By its terms, the Selection Plan will terminate upon Commission approval of the Plan.

[57] As noted above, the Participants stated their belief that certain exemptive relief is necessary to include in the Plan all of the provisions the Participants believe are part of the optimal solution for the CAT. The Commission notes that the request for exemptive relief was granted on March 1, 2016. *See* Exemption Order, *supra* note 18.

[58] If the proposed amendment to the Selection Plan is approved, the Selection Committee may determine to narrow the number of Shortlisted Bids prior to the two rounds of voting.

[59] This recusal provision is included in the Plan, as well as in an amendment to the Selection Plan. *See* Order Approving Amendment No. 2 to the Selection Plan, *supra* note 15.

[60] Each round of voting throughout the Plan is independent of other rounds.

Processor will: (1) Comply with applicable provisions of 15 U.S. Code § 78u–6 (Securities Whistleblower Incentives and Protection) and the recordkeeping requirements of Rule 613(e)(8); (2) consistent with Appendix D, Central Repository Requirements, ensure the effective management and operation of the Central Repository; (3) consistent with Appendix D, Data Management, ensure the accuracy of the consolidation of the CAT Data reported to the Central Repository; and (4) consistent with Appendix D, Upgrade Process and Development of New Functionality, design and implement appropriate policies and procedures governing the determination to develop new functionality for the CAT including, among other requirements, a mechanism by which changes can be suggested by Advisory Committee members, Participants, or the SEC. Such policies and procedures also shall: (1) Provide for the escalation of reviews of proposed technological changes and upgrades to the Operating Committee; and (2) address the handling of surveillance, including coordinated, Rule 17d–2 under the Exchange Act or Regulatory Surveillance Agreement(s) (RSA) surveillance queries and requests for data. Any policy, procedure or standard (and any material modification or amendment thereto) applicable primarily to the performance of the Plan Processor's duties as the Plan Processor (excluding any policies, procedures or standards generally applicable to the Plan Processor's operations and employees) will become effective only upon approval by the Operating Committee. The Plan Processor also will, subject to the prior approval of the Operating Committee, establish appropriate procedures for escalation of matters to the Operating Committee. In addition to other policies, procedures and standards generally applicable to the Plan Processor's employees and contractors, the Plan Processor will have hiring standards and will conduct and enforce background checks (*e.g.*, fingerprint-based) for all of its employees and contractors to ensure the protection, safeguarding and security of the facilities, systems, networks, equipment and data of the CAT System, and will have an insider and external threat policy to detect, monitor and remedy cyber and other threats.

The Plan Processor will enter into appropriate Service Level Agreements ("SLAs") governing the performance of the Central Repository, as generally described in Appendix D, Functionality of the CAT System, with the prior approval of the Operating Committee. The Plan Processor in conjunction with the Operating Committee will regularly review and, as necessary, update the SLAs, in accordance with the terms of the SLAs. As further contemplated in Appendix C, System Service Level Agreements (SLAs), and in Appendix D, System SLAs, the Plan Processor may enter into appropriate service level agreements with third parties applicable to the Plan Processor's functions related to the CAT System ("Other SLAs"), with the prior approval of the Operating Committee. The Chief Compliance Officer and/or the Independent Auditor will, in conjunction with the Plan Processor and as necessary the Operating Committee, regularly review and, as necessary, update the Other SLAs, in accordance with the terms of the applicable Other SLA. In addition, the Plan Processor: (1) Will, on an ongoing basis and consistent with any applicable policies and procedures, evaluate and implement potential system changes and upgrades to maintain and improve the normal day-to-day operating function of the CAT System; (2) in consultation with the Operating Committee, will, on an as needed basis and consistent with any applicable operational and escalation policies and procedures, implement such material system changes and upgrades as may be required to ensure effective functioning of the CAT System; and (3) in consultation with the Operating Committee, will, on an as needed basis, implement system changes and upgrades to the CAT System to ensure compliance with applicable laws, regulations or rules (including those promulgated by the SEC or any Participant). Furthermore, the Plan Processor will develop and, with the prior approval of the Operating Committee, implement a securities trading policy, as well as necessary procedures, control structures and tools to enforce this policy.

In addition, the Plan Processor will provide the Operating Committee regular reports on the CAT System's operation and maintenance. Furthermore, upon request of the Operating Committee or any Subcommittee, the Plan Processor will attend any meetings of the Operating Committee or such Subcommittee.

The Plan Processor may appoint such officers of the Plan Processor as it deems necessary and appropriate to perform its functions under the Plan and Rule 613. The Plan Processor, however, will be required to appoint, at a minimum, the Chief Compliance Officer, the Chief Information Security Officer, and the Independent Auditor. The Operating Committee, by Supermajority Vote, will approve any appointment or removal of the Chief Compliance Officer, Chief Information Security Officer, or the Independent Auditor.

The Plan Processor will designate an employee of the Plan Processor to serve, subject to the approval of the Operating Committee by Supermajority Vote, as the Chief Compliance Officer. The Plan Processor will also designate at least one other employee (in addition to the person then serving as Chief Compliance Officer), which employee the Operating Committee has previously approved, to serve temporarily as the Chief Compliance Officer if the employee then serving as the Chief Compliance Officer becomes unavailable or unable to serve in such capacity (including by reason of injury or illness). Any person designated to serve as the Chief Compliance Officer (including to serve temporarily) will be appropriately qualified to serve in such capacity based on the duties and responsibilities assigned to the Chief Compliance Officer and will dedicate such person's entire working time to such service (or temporary service) (except for any time required to attend to any incidental administrative matters related to such person's employment with the Plan Processor that do not detract in any material respect from such person's service as the Chief Compliance Officer). Article VI sets forth various responsibilities of the Chief Compliance Officer. With respect to all of his or her duties and responsibilities in such capacity (including those as set forth in the Plan), the Chief Compliance Officer will be directly responsible and will directly report to the Operating Committee, notwithstanding that she or he is employed by the Plan Processor. The Plan Processor, subject to the oversight of the Operating Committee, will ensure that the Chief Compliance Officer has appropriate resources to fulfill his or her obligations under the Plan and Rule 613. The compensation (including base salary and bonus) of the Chief Compliance Officer will be payable by the Plan Processor, but be subject to review and approval by the Operating Committee. The Operating Committee will render the Chief Compliance Officer's annual performance review.

The Plan Processor also will designate an employee of the Plan Processor to serve, subject to the approval of the Operating Committee by Supermajority Vote, as the Chief Information Security Officer. The Plan Processor will also designate at least one other employee (in addition to the person then serving as Chief Information Security Officer), which employee the Operating

Committee has previously approved, to serve temporarily as the Chief Information Security Officer if the employee then serving as the Chief Information Security Officer becomes unavailable or unable to serve in such capacity (including by reason of injury or illness). Any person designated to serve as the Chief Information Security Officer (including to serve temporarily) will be appropriately qualified to serve in such capacity based on the duties and responsibilities assigned to the Chief Information Security Officer under the Plan and will dedicate such person's entire working time to such service (or temporary service) (except for any time required to attend to any incidental administrative matters related to such person's employment with the Plan Processor that do not detract in any material respect from such person's service as the Chief Information Security Officer).

The Plan Processor, subject to the oversight of the Operating Committee, will ensure that the Chief Information Security Officer has appropriate resources to fulfill the obligations of the Chief Information Security Officer set forth in Rule 613 and in the Plan, including providing appropriate responses to questions posed by the Participants and the SEC. In performing such obligations, the Chief Information Security Officer will be directly responsible and directly report to the Operating Committee, notwithstanding that he or she is employed by the Plan Processor. The compensation (including base salary and bonus) of the Chief Information Security Officer will be payable by the Plan Processor, but be subject to review and approval by the Operating Committee, and the Operating Committee will render the Chief Information Security Officer's annual performance review. Consistent with Appendices C and D, the Chief Information Security Officer will be responsible for creating and enforcing appropriate policies, procedures, standards, control structures and real time tools to monitor and address data security issues for the Plan Processor and the Central Repository, as described in the Plan. At regular intervals, to the extent that such information is available to the Company, the Chief Information Security Officer will report to the Operating Committee the activities of the Financial Services Information Sharing and Analysis Center ("FS–ISAC") or comparable bodies to the extent that the Company has joined FS–ISAC or other comparable body.

The Plan Processor will afford to Participants and the Commission such access to the Representatives of the Plan Processor as any Participant or the Commission may reasonably request solely for the purpose of performing such Person's regulatory and oversight responsibilities pursuant to the federal securities laws, rules, and regulations or any contractual obligations. The Plan Processor will direct such Representatives to reasonably cooperate with any inquiry, investigation, or proceeding conducted by or on behalf of any Participant or the Commission related to such purpose.

The Operating Committee will review the Plan Processor's performance under the Plan at least once each year, or more often than once each year upon the request of two Participants that are not Affiliated Participants. The Operating Committee will notify the SEC of any determination made by the Operating Committee concerning the continuing engagement of the Plan Processor as a result of the Operating Committee's review of the Plan Processor and will provide the SEC with a copy of any reports that may be prepared in connection therewith.

The Operating Committee, by Supermajority Vote, may remove the Plan Processor from such position at any time. However, the Operating Committee, by Majority Vote, may remove the Plan Processor from such position at any time if it determines that the Plan Processor has failed to perform its functions in a reasonably acceptable manner in accordance with the provisions of the Plan or that the Plan Processor's expenses have become excessive and are not justified. In making such a determination, the Operating Committee will consider, among other factors: (1) The reasonableness of the Plan Processor's response to requests from Participants or the Company for technological changes or enhancements; (2) results of any assessments performed pursuant to Section 6.6; (3) the timeliness of conducting preventative and corrective information technology system maintenance for reliable and secure operations; (4) compliance with requirements of Appendix D; and (5) such other factors related to experience, technological capability, quality and reliability of service, costs, back-up facilities, failure to meet service level agreement(s) and regulatory considerations as the Operating Committee may determine to be appropriate.

In addition, the Plan Processor may resign upon two year's (or such other shorter period as may be determined by the Operating Committee by Supermajority Vote) prior written notice. The Operating Committee will fill any vacancy in the Plan Processor position by Supermajority Vote, and will establish a Plan Processor Selection Subcommittee to evaluate and review Bids and make a recommendation to the Operating Committee with respect to the selection of the successor Plan Processor.

Request for Comment

29. The CAT NMS Plan, Section 6.1 (Plan Processor) sets forth details regarding the Plan Processor's responsibilities. Do Commenters believe that the enumerated responsibilities of the Plan Processor are appropriate and reasonable? Please explain.

30. Do Commenters believe that the CAT NMS Plan provides the Operating Committee with sufficient authority to maintain oversight of the Plan Processor? Is the Plan Processor given too much discretion? Too little? Please explain.

31. The CAT NMS Plan provides in Section 6.1(s) that a Plan Processor may resign upon giving two years notice of such resignation. Do Commenters believe that two years is a sufficient amount of notice to ensure a replacement Plan Processor could be selected? Is two years too long a period to require notice of resignation? Why or why not?

32. The CAT NMS Plan includes two provisions governing removal of the Plan Processor. Section 6.1(q) allows the Operating Committee to remove the Plan Processor at any time by a Supermajority Vote. Do Commenters believe it is appropriate for the Operating Committee to have authority to remove the Plan Processor without cause upon a Supermajority Vote? Why or why not?

33. Section 6.1(r) of the CAT NMS Plan allows the Operating Committee to remove the Plan Processor by a Majority Vote if it determines that the Plan Processor has failed to perform its functions in a reasonably acceptable manner in accordance with the provisions of the CAT LLC Agreement or that the Plan Processor's expenses have become excessive and are not justified. Do Commenters believe it is appropriate and reasonable for the Operating Committee to have the authority to remove the Plan Processor on these bases using a Majority Vote? Why or why not, and with respect to which of these bases? Do Commenters believe there are other grounds upon which the Operating Committee should have the ability to remove the Plan Processor upon a Majority Vote?

34. The CAT NMS Plan states that the Plan Processor must implement policies and procedures consistent with Rule

613(e)(4). Further, Rule 613(e)(4) requires that the CAT NMS Plan include policies and procedures to be used by the Plan Processor to ensure: (1) The security and confidentiality of all information reported to the Central Repository; (2) the timeliness, accuracy, integrity, and completeness of the data provided to the Central Repository; and (3) the accuracy of the consolidation by the Plan Processor of the data provided to the Central Repository. Do Commenters believe that such policies and procedures are adequately described in Appendix D of the CAT NMS Plan? Do Commenters believe such policies and procedures are appropriate and reasonable? Do Commenters believe that additions or deletions should be made to the policies and procedures? If so, please describe.

35. The CAT NMS Plan provides that the CCO and CISO, while Officers of CAT NMS, LLC, would be employees of the Plan Processor. Do Commenters believe that this arrangement creates any conflicts of interest that could undermine the ability of the CCO and CISO to effectively carry out their responsibilities under the CAT NMS Plan? Please describe any such conflicts of interest and explain how they could affect the performance of the CCO or CISO's CAT-related duties.

36. The CAT NMS Plan provides that the Operating Committee must approve the CCO and CISO selected by the Plan Processor by Supermajority Vote, that the CCO and CISO shall dedicate their entire working time to their service as CCO or CISO, that the Operating Committee shall have oversight over the Plan Processor's compensation of and provision of resources to the CCO and CISO, and that the CCO and CISO shall report directly to and receive annual performance reviews from the Operating Committee.[61] Do Commenters believe that these provisions adequately address any conflicts of interest resulting from the CCO and CISO being employees of the Plan Processor? Are there additional steps that could be taken to insulate the CCO and CISO from being unduly influenced by the Plan Processor?

37. The CAT NMS Plan provides that the CCO and CISO would not, to the extent permitted under applicable law, have fiduciary or similar duties to CAT NMS, LLC, but that they may have fiduciary or similar duties to the Plan Processor to the extent that their employment with the Plan Processor entails such duties.[62] Do Commenters believe that these provisions could affect the ability of the CCO and CISO to carry out their CAT-related duties? Would any alternative provisions be preferable? For example, should the Plan remain silent regarding the CCO and CISO's fiduciary or other duties to the Plan Processor and CAT NMS, LLC? Should the Plan require the CCO and CISO to affirmatively undertake fiduciary or similar duties to CAT NMS, LLC? Should the Plan Processor be required to select individuals who do not have fiduciary or similar duties to the Plan Processor to be the CCO or CISO? What are the advantages and disadvantages to each approach?

38. Is the mechanism by which changes to CAT functionality can be suggested to the Plan Processor by the Advisory Committee members, Participants, or the SEC appropriate and reasonable? Why or why not?

39. Is the Operating Committee's role in the hiring of the CCO, CISO, and Independent Auditor appropriate and reasonable? Should the Advisory Committee be consulted on these decisions? Why or why not?

B. Central Repository

The Central Repository, under the oversight of the Plan Processor, and consistent with Appendix D, Central Repository Requirements, will receive, consolidate, and retain all CAT Data. The Central Repository will collect (from a SIP or pursuant to an NMS Plan) and retain on a current and continuing basis, in a format compatible with the Participant Data and Industry Member Data, all data, including the following: (1) Information, including the size and quote condition, on quotes, including the National Best Bid and National Best Offer for each NMS Security; (2) Last Sale Reports and transaction reports reported pursuant to an effective transaction reporting plan filed with the SEC pursuant to, and meeting the requirements of, Rules 601 and 608; (3) trading halts, LULD price bands and LULD indicators; and (4) summary data.[63]

Consistent with Appendix D, Data Retention Requirements, the Central Repository will retain the information collected pursuant to paragraphs (c)(7) and (e)(7) of Rule 613 in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention by the Plan Processor for a period of not less than six years. Such data when available to the Participant regulatory Staff and the SEC will be linked. In addition, the Plan Processor will implement and comply with the records retention policy contemplated by Section 6.1(d)(i).

Consistent with Appendix D, Data Access, the Plan Processor will provide Participants and the SEC access to the Central Repository (including all systems operated by the Central Repository), and access to and use of the CAT Data stored in the Central Repository, solely for the purpose of performing their respective regulatory and oversight responsibilities pursuant to the federal securities laws, rules and regulations or any contractual obligations. The Plan Processor will create and maintain a method of access to the CAT Data stored in the Central Repository that includes the ability to run searches and generate reports. The method in which the CAT Data is stored in the Central Repository will allow the ability to return results of queries that are complex in nature including market reconstruction and the status of order books at varying time intervals. The Plan Processor will, at least annually and at such earlier time promptly following a request by the Operating Committee, certify to the Operating Committee that only the Participants and the SEC have access to the Central Repository (other than access provided to any Industry Member for the purpose of correcting CAT Data previously reported to the Central Repository by such Industry Member).[64]

Request for Comment

40. Do Commenters believe that the requirements presented in Appendix D, Central Repository Requirements, are sufficiently detailed to guide the Plan Processor in how to build and operate the Central Repository with regard to receiving, consolidating, and retaining data? If not, what additional information should the requirements contain? Are there any requirements that should be eliminated? Will such provisions give the Plan Processor too much discretion or flexibility in how to build and operate the Central Repository with regard to receiving, consolidating, and retaining data? Please identify and explain why such requirements are not necessary or appropriate.

41. Do Commenters believe that the information provided in Appendix D, Data Access, is sufficiently detailed to

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[61] *See* CAT NMS Plan, *supra* note 3, at Sections 6.2(a)(i)–(iv), b(i)–(iv).

[62] *See id.* at Section 4.6(a), 4.7(c).

[63] In the CAT NMS Plan as attached hereto as *Exhibit A,* Section 6.5(a)(ii)(D) was amended to clarify that "summary data" refers to "summary data or reports described in the specifications for each of the SIPs and disseminated by the respective SIP."

[64] *See* CAT NMS Plan, *supra* note 3, at Appendix C, The Security and Confidentiality of Information Reported to the Central Repository, and Appendix D, Data Security, describe the security and confidentiality of the CAT Data, including how access to the Central Repository is controlled.

inform the Plan Processor and regulators how access to data will be granted? Are the controls and security provisions related to regulatory access to data appropriate and reasonable? Should additional provisions be included? If so, please identify and explain why such provisions are necessary. Should any provisions be modified or eliminated? Will such provisions give the Plan Processor too much discretion or flexibility in how to build and operate the Central Repository with regard to regulator access to the data? If so, please identify and explain why such provisions should be modified or not included in the CAT NMS Plan.

42. The CAT NMS Plan does not mandate a specific method for primary data storage of CAT Data, but does require that the storage solution would meet the security, reliability, and accessibility requirements for the CAT, including storage of personally identifiable information ("PII") data, separately. The CAT NMS Plan also indicates several considerations in the selection of a storage solution including maturity, cost, complexity, and reliability of the storage method. The Commission requests comment on whether the CAT NMS Plan should mandate a particular data storage method. Why or why not? What are the advantages and disadvantages for CAT of the various storage methods?

C. Data Recording and Reporting by Participants

The Plan also sets forth the requirements regarding the data recording and reporting by Participants.[65] Each Participant will record and electronically report to the Central Repository the following details for each order and each Reportable Event,[66] as applicable ("Participant Data"; also referred to as "Recorded Industry Member Data", as discussed in the next Section):

for original receipt or origination of an order: (1) Firm Designated ID(s) (FDIs) for each customer; (2) CAT-Order-ID; (3) SRO-Assigned Market Participant Identifier of the Industry Member receiving or originating the order; (4) date of order receipt or origination; (5) time of order receipt or origination (using time stamps pursuant to Section 6.8); (6) the Material Terms of the Order;[67] and (7) other information as may be determined by the Operating Committee.[68]

for the routing of an order: (1) CAT-Order-ID; (2) date on which the order is routed; (3) time at which the order is routed (using time stamps pursuant to Section 6.8); (4) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order; (5) SRO-Assigned Market Participant Identifier of the Industry Member or Participant to which the order is being routed; (6) if routed internally at the Industry Member, the identity and nature of the department or desk to which the order is routed; (7) the Material Terms of the Order; and (8) other information as may be determined by the Operating Committee.[69]

for the receipt of an order that has been routed, the following information: (1) CAT-Order-ID; (2) date on which the order is received; (3) time at which the order is received (using time stamps pursuant to Section 6.8); (4) SRO-Assigned Market Participant Identifier of the Industry Member or Participant receiving the order; (5) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order; (6) the Material Terms of the Order; and (7) other information as may be determined by the Operating Committee.[70]

if the order is modified or cancelled: (1) CAT-Order-ID; (2) date the modification or cancellation is received or originated; (3) time at which the modification or cancellation is received or originated (using time stamps pursuant to Section 6.8); (4) price and remaining size of the order, if modified; (5) other changes in Material Terms, if modified; (6) whether the modification or cancellation instruction was given by the Customer, or was initiated by the Industry Member or Participant; and (7) other information as may be determined by the Operating Committee.[71]

if the order is executed, in whole or in part: (1) CAT-Order-ID; (2) date of execution; (3) time of execution (using time stamps pursuant to Section 6.8); (4) execution capacity (principal, agency or riskless principal); (5) execution price and size; (6) the SRO-Assigned Market Participant Identifier of the Participant or Industry Member executing the order; and (7) whether the execution was reported pursuant to an effective transaction reporting plan or the Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information; and other information or additional events as may be determined by the Operating Committee[72] or otherwise prescribed in Appendix D, Reporting and Linkage Requirements.

As contemplated in Appendix D, Data Types and Sources, each Participant will report Participant Data to the Central Repository for consolidation and storage in a format specified by the Plan Processor, approved by the Operating Committee and compliant with Rule 613. As further described in Appendix D, Reporting and Linkage Requirements, each Participant is required to record the Participant Data contemporaneously with the Reportable Event. In addition, each Participant must report the Participant Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day that the Participant recorded the Participant Data. Participants may voluntarily report the Participant Data prior to the 8:00 a.m. Eastern Time deadline.

Each Participant that is a national securities exchange is required to comply with the above recording and reporting requirements for each NMS Security registered or listed for trading on such exchange or admitted to unlisted trading privileges on such exchange. Each Participant that is a national securities association is required to comply with the above recording and reporting requirements for each Eligible Security for which transaction reports are required to be submitted to the association.

D. Data Reporting and Recording by Industry Members

The Plan also sets forth the data reporting and recording requirements for Industry Members. Specifically, subject to Section 6.4(c), and Section 6.4(d)(iii) with respect to Options Market Makers, and consistent with Appendix D, Reporting and Linkage Requirements, each Participant, through its Compliance Rule, will require its Industry Members to record and electronically report to the Central Repository for each order and each Reportable Event the information referred to in Section 6.3(d), as applicable ("Recorded Industry Member Data")—that is, Participant Data discussed above. In addition, subject to Section 6.4(c), and Section 6.4(d)(iii) with respect to Options Market Makers, and consistent with Appendix D, Reporting and Linkage Requirements, each Participant, through its Compliance Rule, will require its Industry Members to record and report to the Central Repository the following ("Received Industry Member Data" and, collectively with the Recorded Industry Member Data, "Industry Member Data"): (1) If the order is executed, in whole or in part: (a) An Allocation Report that includes the Firm Designated ID when an execution is allocated (in whole or in part);[73] (b) SRO-Assigned Market Participant Identifier of the clearing broker or prime broker, if applicable; and (c) CAT-Order-ID of any contra-side order(s); (2) if the trade is cancelled, a cancelled trade indicator; and (3) for original receipt or origination of an order, information of sufficient detail to identify the Customer.

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[65] Participants may, but are not required to, coordinate compliance with the recording and reporting efforts through the use of regulatory services agreements and/or agreements adopted pursuant to Rule 17d–2 under the Exchange Act.

[66] The CAT NMS Plan defines "Reportable Event" as "includ[ing], but . . . not limited to, the original receipt or origination, modification, cancellation, routing, execution (in whole or in part) and allocation of an order, and receipt of a routed order." *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[67] For a discussion of the Material Terms of the Order required by Rule 613, *see* Adopting Release, *supra* note 9, at 45750–52. The Commission notes that the Participants include in the Plan a requirement for the reporting of the OTC equity security symbol as one of the "Material Terms of the Order." *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[68] In the CAT NMS Plan as attached hereto as *Exhibit A,* the provisions of Section 6.3 enabling the Operating Committee to require Participants to record and report "other information" were removed.

[69] *Id.*

[70] *Id.*

[71] *Id.*

[72] *Id.*

With respect to the reporting obligations of an Options Market Maker with regard to its quotes in Listed Options, Reportable Events required pursuant to Section 6.3(d)(ii) and (iv) will be reported to the Central Repository by an Options Exchange in lieu of the reporting of such information by the Options Market Maker. Each Participant that is an Options Exchange will, through its Compliance Rule, require its Industry Members that are Options Market Makers to report to the Options Exchange the time at which a quote in a Listed Option is sent to the Options Exchange (and, if applicable, any subsequent quote modifications and/or cancellation time when such modification or cancellation is originated by the Options Market Maker). Such time information also will be reported to the Central Repository by the Options Exchange in lieu of reporting by the Options Market Maker.[74]

Each Participant will, through its Compliance Rule, require its Industry Members to record and report to the Central Repository other information or additional events as prescribed in Appendix D, Reporting and Linkage Requirements.

As contemplated in Appendix D, Data Types and Sources, each Participant will require its Industry Members to report Industry Member Data to the Central Repository for consolidation and storage in a format(s) specified by the Plan Processor, approved by the Operating Committee and compliant with Rule 613. As further described in Appendix D, Reporting and Linkage Requirements, each Participant will require its Industry Members to record Recorded Industry Member Data contemporaneously with the applicable Reportable Event. In addition, consistent with Appendix D, Reporting and Linkage Requirements, each Participant will require its Industry Members to report: (1) Recorded Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member records such Recorded Industry Member Data; and (2) Received Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member receives such Received Industry Member Data. Each Participant will permit its Industry Members to voluntarily report Industry Member Data prior to the applicable 8:00 a.m. Eastern Time deadline.[75]

Each Participant that is a national securities exchange must require its Industry Members to report Industry Member Data for each NMS Security registered or listed for trading on such exchange or admitted to unlisted trading privileges on such exchange. Each Participant that is a national securities association must require its Industry Members to report Industry Member Data for each Eligible Security for which transaction reports are required to be submitted to the association.

Request for Comment

43. Sections 6.3(d) and 6.4(d) of the CAT NMS Plan set forth the details that Participants and Industry Members must report to the Central Repository. Do Commenters believe that these details will be sufficient to allow the Central Repository to link information to accurately reflect the lifecycle of an order? If not, what additional information should be required to be reported for this purpose?

44. Sections 6.3 and 6.4 of the CAT NMS Plan require Participants and Industry Members to record and report to the Central Repository other information or additional events as may be prescribed in Appendix D, Reporting and Linkage Requirements. Do Commenters believe that the CAT NMS Plan is sufficiently clear regarding the "other information or additional events as may be prescribed in Appendix D" that may be required? Please explain. Are these "other information or additional events prescribed in Appendix D" appropriate and reasonable? Please explain.

45. The CAT NMS Plan does not specify the format in which CAT Reporters must submit data, and states the Plan Processor will specify the format. Do Commenters believe that the CAT NMS Plan should specify a particular format? If so, what format? Please explain.

E. Regular Written Assessment

As described in Article VI, the Participants are required to provide the Commission with a written assessment of the operation of the CAT that meets the requirements set forth in Rule 613, Appendix D, and the Plan at least every two years or more frequently in connection with any review of the Plan Processor's performance under the Plan pursuant to Section 6.1(m).[76] The Chief Compliance Officer will oversee this assessment and will provide the Participants a reasonable time to review and comment upon the written assessment prior to its submission to the SEC. In no case will the written assessment be changed or amended in response to a comment from a Participant; rather any comment by a Participant will be provided to the SEC at the same time as the written assessment.

Request for Comment

46. Do Commenters believe that the details and requirements regarding the regular written assessment of the operation of the CAT provided in Section 6.6 of the CAT NMS Plan are appropriate and reasonable? Would additional details or requirements for this assessment be beneficial?

47. Do Commenters believe that the Chief Compliance Officer should oversee the regular written assessment, as is required by Section 6.6? If not, would another party be better suited to this role?

F. Time Stamps and Synchronization of Business Clocks

Section 6.8 of the Plan discusses time stamps and the synchronization of Business Clocks. Each Participant is required to synchronize its Business Clocks (other than such Business Clocks used solely for Manual Order Events) at a minimum to within 50 milliseconds of the time maintained by the National Institute of Standards and Technology, consistent with industry standards. In addition, each Participant must, through its Compliance Rule, require its Industry Members to: (1) Synchronize their respective Business Clocks (other than such Business Clocks used solely for Manual Order Events) at a minimum to within 50 milliseconds of the time maintained by the National Institute of Standards and Technology, and maintain such a synchronization; (2)

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[73] In the Amendment to the CAT NMS Plan, language in Section 6.4(d) that read, "that includes the Firm Designated ID when an execution is allocated (in whole or in part)" was removed because the definition of "Allocation Report" includes this information.

[74] *See* Section III.B.9, *infra*, and accompanying requests for comment.

[75] *See* Section III.B.2, *infra*, and accompanying requests for comment.

[76] The Commission notes that the applicable provision in the Amendment is Section 6.1(n).

certify periodically that their Business Clocks meet the requirements of the Compliance Rule; and (3) report to the Plan Processor and the Participant any violation of the Compliance Rule pursuant to the thresholds set by the Operating Committee. Furthermore, each Participant is required to synchronize its Business Clocks and, through its Compliance Rule, require its Industry Members to synchronize their Business Clocks used solely for Manual Order Events at a minimum to within one second of the time maintained by the National Institute of Standards and Technology, consistent with industry standards, and maintain such synchronization. Each Participant will require its Industry Members to certify periodically (according to a schedule defined by the Operating Committee) that their Business Clocks used solely for Manual Order Events meet the requirements of the Compliance Rule. The Compliance Rule of a Participant shall require its Industry Members using Business Clocks solely for Manual Order Events to report to the Plan Processor any violation of the Compliance Rule pursuant to the thresholds set by the Operating Committee. The Participants stated their belief that pursuant to Rule 613(d)(1) that these synchronization standards are consistent with current industry standards.

Each Participant shall, and through its Compliance Rule require its Industry Members to, report information required by Rule 613 and this Agreement to the Central Repository in milliseconds. To the extent that any Participant utilizes time stamps in increments finer than the minimum required by the Plan, the Participant is required to make reports to the Central Repository utilizing such finer increment when reporting CAT Data to the Central Repository so that all Reportable Events reported to the Central Repository could be adequately sequenced. Each Participant will, through its Compliance Rule: (1) Require that, to the extent that its Industry Members utilize time stamps in increments finer than the minimum required in the Plan, such Industry Members will utilize such finer increment when reporting CAT Data to the Central Repository; and (2) provide that a pattern or practice of reporting events outside of the required clock synchronization time period without reasonable justification or exceptional circumstances may be considered a violation of SEC Rule 613 and the Plan. Notwithstanding the preceding sentences, each Participant and Industry Member will be permitted to record and report Manual Order Events to the Central Repository in increments up to and including one second, provided that Participants and Industry Members will be required to record and report the time when a Manual Order Event has been captured electronically in an order handling and execution system of such Participant or Industry Member in milliseconds. In conjunction with Participants' and other appropriate Industry Member advisory groups, the Chief Compliance Officer will annually evaluate and make a recommendation to the Operating Committee as to whether industry standards have evolved such that the required synchronization should be shortened or the required time stamp should be in finer increments. The Operating Committee will make determinations regarding the need to revise the synchronization and time stamp requirements.

Request for Comment[77]

48. Do Commenters believe that the CAT NMS Plan's requirement that Participants and Industry Members synchronize their Business Clocks to within 50 milliseconds of the time maintained by the National Institute of Standards and Technology ("NIST") is appropriate and reasonable? Do Commenters agree with the Participants that this clock offset tolerance represents current industry standards? Would a tighter clock offset tolerance be feasible?

49. Do Commenters believe that the CAT NMS Plan's requirement that Participants and Industry Members report information to the Central Repository in milliseconds is appropriate and reasonable? Would a more granular time stamp requirement be feasible? Do Commenters agree with the Participants that time stamp granularity to the millisecond represents current industry standards?

50. How should "industry standard," for purposes of the CAT NMS Plan's clock synchronization and time stamping requirements, be determined? Do Commenters believe that "industry standard" should be based on current industry practice? If not, how should "industry standard" be defined? What other factors, if any, should be considered in defining such "industry standards"?

G. Technical Specifications

Section 6.9 of the Plan establishes the requirements involving the Plan Processor's Technical Specifications. The Plan Processor will publish Technical Specifications that are at a minimum consistent with Appendices C and D, and updates thereto as needed, providing detailed instructions regarding the submission of CAT Data by Participants and Industry Members to the Plan Processor for entry into the Central Repository. The Technical Specifications will be made available on a publicly available Web site to be developed and maintained by the Plan Processor. The initial Technical Specifications and any Material Amendments thereto will require the approval of the Operating Committee by Supermajority Vote.

The Technical Specifications will include a detailed description of the following: (1) The specifications for the layout of files and records submitted to the Central Repository; (2) the process for the release of new data format specification changes; (3) the process for industry testing for any changes to data format specifications; (4) the procedures for obtaining feedback about and submitting corrections to information submitted to the Central Repository; (5) each data element, including permitted values, in any type of report submitted to the Central Repository; (6) any error messages generated by the Plan Processor in the course of validating the data; (7) the process for file submissions (and re-submissions for corrected files); (8) the storage and access requirements for all files submitted; (9) metadata requirements for all files submitted to the CAT System; (10) any required secure network connectivity; (11) data security standards, which will, at a minimum: (a) Satisfy all applicable regulations regarding database security, including provisions of Regulation Systems Compliance and Integrity under the Exchange Act ("Reg SCI"); (b) to the extent not otherwise provided for under the Plan (including Appendix C thereto), set forth such provisions as may be necessary or appropriate to comply with Rule 613(e)(4); and (c) comply with industry best practices; and (12) any other items reasonably deemed appropriate by the Plan Processor and approved by the Operating Committee.

Amendments to the Technical Specifications may be made only in accordance with Section 6.9(c). The process for amending the Technical Specifications varies depending on whether the change is material. An amendment will be deemed "material" if it would require a Participant or an Industry Member to engage in significant changes to the coding necessary to submit information to the Central Repository pursuant to the Plan, or if it is required to safeguard the security or confidentiality of the CAT Data. Except for Material Amendments to the Technical Specifications, the Plan Processor will have the sole discretion to amend and publish interpretations regarding the Technical Specifications; however, all non-Material Amendments made to the Technical Specifications and all published interpretations will be provided to the Operating Committee in writing at least ten days before being published. Such non-Material Amendments and published interpretations will be deemed approved ten days following provision to the Operating Committee unless two unaffiliated Participants call for a vote to be taken on the proposed amendment or interpretation. If an amendment or interpretation is called for a vote by two or more unaffiliated Participants, the proposed amendment must be approved by Majority Vote of the Operating Committee. Once a non-Material Amendment has been approved or deemed approved by the Operating Committee, the Plan Processor will be responsible for determining the specific changes to the Central Repository and providing technical documentation of those changes, including an implementation timeline.

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[77] *See* Sections III.B.4 and III.B.5, *infra*, for additional requests for comment on clock synchronization and time stamp granularity.

Material Amendments to the Technical Specifications require approval of the Operating Committee by Supermajority Vote. The Operating Committee, by Supermajority Vote, may amend the Technical Specifications on its own motion.

Request for Comment

51. Do Commenters believe that the list of items to be included in the Technical Specifications, as set forth in Section 6.9(b) of the CAT NMS Plan, is appropriate and reasonable? Do Commenters believe that detailed descriptions of any of the listed items should be included in the CAT NMS Plan rather than in the Technical Specifications? Do Commenters believe that the list addresses all of the areas that should be included in the Technical Specifications? Are there other aspects of the CAT that require Technical Specifications? If so, please identify and explain why the additional Technical Specifications are needed.

52. Do Commenters believe the Plan Processor should have sole discretion to amend and publish interpretations regarding the Technical Specifications, except for Material Amendments? Why or why not? What discretion or input, if any, should the Operating Committee or other parties, including the Advisory Committee, have in amending and publishing Technical Specifications interpretations?

53. How should Technical Specifications be communicated to the industry? Why?

54. What are the incentives for the Operating Committee to review the Plan Processor's interpretation of Technical Specifications and verify that the interpretation is consistent with the regulatory objectives of the Plan? What are the best practices to ensure sufficient review by the Operating Committee? What provisions of the Plan are in place to ensure that the Operating Committee follows these practices? What provisions, if any, could be strengthened? Please explain and provide supporting examples and evidence, if available.

55. The CAT NMS Plan provides that non-Material Amendments and published interpretations will be deemed approved ten days following provision to the Operating Committee, unless two unaffiliated Participants call for a vote to be taken on the proposed amendment or interpretation. Do Commenters have any views on this process? If so, please explain.

56. Do Commenters have any views regarding the definition of Material Amendments? Is the definition too broad? Too narrow? Please explain. Do Commenters have any views on who should be responsible for determining whether an amendment to the Technical Specifications is a Material Amendment? Do Commenters believe the CAT NMS Plan clearly states who shall have the responsibility to make the determination? Do Commenters have any views on how the determination should be made? Please explain.

57. The CAT NMS Plan requires that Material Amendments be approved by the Operating Committee by Supermajority Vote and allows the Operating Committee to amend the Technical Specifications on its own motion by Supermajority Vote. Do Commenters have any views on these processes? If so, please explain.

58. The CAT NMS Plan provides that the Plan Processor's business continuity planning must include a secondary site for critical staff, capable of recovery and restoration of services within 48 hours, with the goal of next day recovery. Should the CAT NMS Plan provide additional details regarding "the goal of next day recovery"? Do Commenters believe a 48-hour recovery and restoration period is too long? Too short? Please explain. Should the CAT NMS Plan impose any other requirements on the Plan Processor to better assure the Plan Processor is able to transition to the secondary site within the specified time frames? If so, what?

H. Surveillance

Surveillance issues are described in Section 6.10. Using the tools provided for in Appendix D, Functionality of the CAT System, each Participant will develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the Central Repository. Unless otherwise ordered by the SEC, within fourteen months after the Effective Date, each Participant must initially implement a new or enhanced surveillance system(s) as required by Rule 613 and Section 6.10(a) of the Plan. Participants may, but are not required to, coordinate surveillance efforts through the use of regulatory services agreements and agreements adopted pursuant to Rule 17d–2 under the Exchange Act.

Consistent with Appendix D, Functionality of the CAT System, the Plan Processor will provide Participants and the SEC with access to all CAT Data stored in the Central Repository. Regulators will have access to processed CAT Data through two different methods: (1) An online targeted query tool; and (2) user-defined direct queries and bulk extracts. The online targeted query tool will provide authorized users with the ability to retrieve CAT Data via an online query screen that includes the ability to choose from a variety of pre-defined selection criteria. Targeted queries must include date(s) and/or time range(s), as well as one or more of a variety of fields. The user-defined direct queries and bulk extracts will provide authorized users with the ability to retrieve CAT Data via a query tool or language that allows users to query all available attributes and data sources.

Extraction of CAT Data will be consistent with all permission rights granted by the Plan Processor. All CAT Data returned will be encrypted, and PII data will be masked unless users have permission to view the PII contained in the CAT Data that has been requested.

The Plan Processor will implement an automated mechanism to monitor direct query usage. Such monitoring will include automated alerts to notify the Plan Processor of potential issues with bottlenecks or excessively long queues for queries or CAT Data extractions. The Plan Processor will provide the Operating Committee or its designee(s) details as to how the monitoring will be accomplished and the metrics that will be used to trigger alerts.

The Plan Processor will reasonably assist regulatory Staff (including those of Participants) with creating queries. Without limiting the manner in which regulatory Staff (including those of Participants) may submit queries, the Plan Processor will submit queries on behalf of regulatory Staff (including those of Participants) as reasonably requested. The Plan Processor will staff a CAT help desk, as described in Appendix D, CAT Help Desk, to provide technical expertise to assist regulatory Staff (including those of Participants) with questions about the content and structure of the CAT Data.

Request for Comment

59. What features of the CAT NMS Plan will facilitate the creation of enhanced surveillance systems? Are the minimum functional and technical requirements for the Plan Processor set forth in Appendix D consistent with the creation of enhanced surveillance systems? What, if any, additional requirements or details should be provided in the CAT NMS Plan to ensure that the Plan facilitates the creation of enhanced surveillance systems?

60. Under the CAT NMS Plan, will regulatory Staff have appropriate access to the Central Repository? Specifically, do Commenters believe that the online targeted query tool and user-defined direct queries and bulk extracts described in Sections 8.1 and 8.2 of Appendix D will enable regulatory Staff to use the data in the Central Repository to carry out their surveillance, analysis, and other regulatory functions? If not, why not and what should be added? Does the CAT NMS Plan provide sufficient detail to determine if regulators will have appropriate access? If not, what additional details should be provided?

61. Do Commenters believe that the provisions in Section 6.10(c)(ii) of the CAT NMS Plan regarding permission rights granted by the Plan Processor, encryption, and masking of PII are appropriate and reasonable? Would these provisions affect the ability of Commission or SRO regulatory Staff to access and use the data in the Central Repository? If so, what additional or different provisions would mitigate the impact on regulatory access to and use of the data?

62. Do Commenters believe that the query monitoring mechanism to be implemented by the Plan Processor, as described in Section 6.10(c)(iii) of the CAT NMS Plan, is appropriately designed to help enable regulators to carry out their regulatory functions? If not, what additional details or functionality should be provided? Will the provisions regarding Plan Processor assistance of regulatory Staff and submission of regulatory Staff queries (Sections 6.10(c)(iv)–(v) of the CAT NMS Plan) and the CAT user support functionality (as described in Section 10.2 of Appendix D) provide sufficient assistance to regulators in carrying out their regulatory functions?

I. Information Security Program

As set forth in Section 6.12, the Plan Processor is required to develop and maintain a comprehensive information security program for the Central Repository that contains, at a minimum, the specific requirements detailed in Appendix D, Data Security. The information security program must be approved and reviewed at least annually by the Operating Committee.

Request for Comment

63. Do Commenters believe the CAT NMS Plan should include a discussion of policies and procedures applicable to members of the Advisory Committee to ensure the security and confidentiality of the operation of the CAT (for example, requiring members of the Advisory Committee to enter into a non-disclosure agreement with the Company)? If so, what additional measures should be considered?

64. Do Commenters believe the CAT NMS Plan should detail the policies and procedures applicable to regulatory users of the CAT that would ensure the security and confidentiality of the CAT Data and the operation of the CAT? If so, what measures should be considered? Do Commenters have any views on how such policies and procedures should be enforced? Please explain.

(6) Financial Matters

Articles VII and VIII of the Plan address certain financial matters related to the Company. In particular, the Plan states that, subject to certain special allocations provided for in Section 8.2, any net profit or net loss will be allocated among the Participants equally. In addition, subject to Section 10.2, cash and property of the Company will not be distributed to the Participants unless the Operating Committee approves by Supermajority Vote a distribution after fully considering the reason that such distribution must or should be made to the Participants, including the circumstances contemplated under Section 8.3, Section 8.6, and Section 9.3. To the extent a distribution is made, all Participants will participate equally in any such distribution except as otherwise provided in Section 10.2.

Article XI addresses the funding of the Company. On an annual basis the Operating Committee will approve an operating budget for the Company. The budget will include the projected costs of the Company, including the costs of developing and operating the CAT System for the upcoming year, and the sources of all revenues to cover such costs, as well as the funding of any reserve that the Operating Committee reasonably deems appropriate for prudent operation of the Company.

Subject to certain funding principles set forth in Article XI, the Operating Committee will have discretion to establish funding for the Company, including: (1) Establishing fees that the Participants will pay; and (2) establishing fees for Industry Members that will be implemented by Participants. In establishing the funding of the Company, the Operating Committee will seek to: (1) Create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate and administer the CAT and the other costs of the Company; (2) establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act, taking into account the timeline for implementation of the CAT and distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon Company resources and operations; (3) establish a tiered fee structure in which the fees charged to: (a) CAT Reporters that are Execution Venues, including ATSs, are based upon the level of market share, (b) Industry Members' non-ATS activities are based upon message traffic, and (c) the CAT Reporters with the most CAT-related activity (measured by market share and/or message traffic, as applicable) are generally comparable (where, for these comparability purposes, the tiered fee structure takes into consideration affiliations between or among CAT Reporters, whether Execution Venues and/or Industry Members); (4) provide for ease of billing and other administrative functions; (5) avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality; and (6) build financial stability to support the Company as a going concern. The Participants will file with the SEC under Section 19(b) of the Exchange Act any such fees on Industry Members that the Operating Committee approves, and such fees will be labeled as "Consolidated Audit Trail Funding Fees."

To fund the development and implementation of the CAT, the Company will time the imposition and collection of all fees on Participants and Industry Members in a manner reasonably related to the timing when the Company expects to incur such development and implementation costs. In determining fees for Participants and Industry Members, the Operating Committee shall take into account fees, costs and expenses (including legal and consulting fees and expenses) incurred by the Participants on behalf of the Company prior to the Effective Date in connection with the creation and implementation of the CAT, and such fees, costs and expenses shall be fairly and reasonably shared among the Participants and Industry Members. Consistent with Article XI, the Operating Committee will adopt policies, procedures, and practices regarding the budget and budgeting process, assignment of tiers, resolution of disputes, billing and collection of fees, and other related matters. As a part of its regular review of fees for the CAT, the Operating Committee will have the right to change the tier assigned to any particular Person pursuant to this Article XI.[78] Any such changes will be effective upon reasonable notice to such Person.

The Operating Committee will establish fixed fees to be payable by Execution Venues as follows. Each Execution Venue that executes transactions, or, in the case of a national securities association, has trades reported by its members to its trade reporting facility or facilities for reporting transactions effected otherwise than on an exchange, in NMS Stocks or OTC Equity Securities will pay a fixed fee depending on the market share of that Execution Venue in NMS Stocks and OTC Equity Securities. The Operating Committee will establish at least two and no more than five tiers of fixed fees, based on an Execution Venue's NMS Stocks and OTC Equity Securities market share. For these purposes, market share will be calculated by share volume. In addition, each Execution Venue that executes transactions in Listed Options will pay a fixed fee depending on the Listed Options market share of that Execution Venue. The Operating Committee will establish at least two and no more than five tiers of fixed fees, based on an Execution Venue's Listed Options market share, with market share calculated by contract volume. Changes to the number of tiers after approval of the Plan would require a Supermajority Vote of the Operating Committee and Commission approval under Section 19(b) of the Exchange Act, as would the establishment of the initial fee schedule and any changes to the fee schedule within the tier structure.[79]

The Operating Committee also will establish fixed fees payable by Industry Members, based on the message traffic generated by such Industry Member. The Operating Committee will establish at least five and no more than nine tiers of fixed fees, based on message traffic. For the avoidance of doubt, the fixed fees payable by Industry Members pursuant to this paragraph will, in addition to any other applicable message traffic, include message traffic generated by: (1) An ATS that does not execute orders that is sponsored by such Industry Member; and (2) routing orders to and from any ATS system sponsored by such Industry Member.

Furthermore, the Operating Committee may establish any other fees ancillary to the operation of the CAT that it reasonably determines appropriate, including: Fees for the late or inaccurate reporting of information to the CAT; fees for correcting submitted information; and fees based on access and use of the CAT for regulatory and oversight purposes (and not including any reporting obligations).[80]

The Company will make publicly available a schedule of effective fees and charges adopted pursuant to the Plan as in effect from time to time. Such schedule will be developed after the Plan Processor is selected. The Operating Committee will review the fee schedule on at least an annual basis and will make any changes to such fee schedule that it deems appropriate. The Operating Committee is authorized to review the fee schedule on a more regular basis, but will not make any changes on more than a semi-annual basis unless, pursuant to a Supermajority Vote, the Operating Committee concludes that such change is necessary for the adequate funding of the Company.

The Operating Committee will establish a system for the collection of fees authorized under the Plan. The Operating Committee may include such collection responsibility as a function of the Plan Processor or another administrator. Alternatively, the Operating Committee may use the facilities of a clearing agency registered under Section 17A of the Exchange Act to provide for the collection of such fees.

Each Participant will require each Industry Member to pay all applicable fees authorized under Article XI within thirty days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated). If an Industry Member fails to pay any such fee when due, such Industry Member will pay interest on the outstanding balance from such due date until such fee is paid at a per annum rate equal to the lesser of: (1) The Prime Rate plus 300 basis points; or (2) the maximum rate permitted by applicable law. Each Participant will pay all applicable fees authorized under Article XI as required by Section 3.7(b).

Disputes with respect to fees the Company charges Participants pursuant to Article XI will be determined by the Operating Committee or a Subcommittee designated by the Operating Committee. Decisions by the Operating Committee on such matters shall be binding on Participants, without prejudice to the rights of any Participant to seek redress from the SEC pursuant to SEC Rule 608 or in any other appropriate forum. The Participants will adopt rules requiring that disputes with respect to fees charged to Industry Members pursuant to Article XI be determined by the Operating Committee or a Subcommittee. Decisions by the Operating Committee or Subcommittee on such matters will be binding on Industry Members, without prejudice to the rights of any Industry Member to seek redress from the SEC pursuant to SEC Rule 608 or in any other appropriate forum.

Request for Comment

65. Do Commenters believe that the provisions in the CAT NMS Plan regarding the funding and budget of the Company to operate the CAT (as described in Article XI) are appropriate and reasonable? Specifically, do Commenters believe that the tiered funding model described in Section 11.2(c) of the CAT NMS Plan and the fixed-tier funding model described in

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[78] The Commission notes that Section 11.1(b) of the CAT NMS Plan states that the Participants would file fees for Industry Members approved by the Operating Committee with the Commission. The Operating Committee may only change the tier to which a Person is assigned in accordance with a fee schedule filed with the Commission.

[79] The Commission notes that the Participants could choose to submit the proposed fee schedule to the Commission as individual SROs pursuant to Rule 19b–4 or jointly as Participants to an NMS plan pursuant to Rule 608 of Regulation NMS. Because the proposed fee schedule would establish fees, whether the Participants individually file it pursuant to Section 19(b)(3)(A)(ii) of the Act, or jointly file it pursuant to Rule 608(b)(3)(i) of Regulation NMS, the proposed fee schedule could take effect upon filing with the Commission. *See* 15 U.S.C. 78s(b)(3)(A)(ii); 17 CFR 242.608(b)(3)(i).

[80] As it relates to any fees that the Operating Committee may impose for access and use of the CAT for regulatory and oversight purposes, the Commission interprets the provisions in the Plan relating to the collection of fees as applying only to Participants and Industry Members, and thus the Commission would not be subject to such fees.

Section 11.3 of the CAT NMS Plan are appropriate and reasonable?

66. What are Commenters' views regarding the methodology in the CAT NMS Plan to establish and impose fees on Participants and the industry? Do Commenters believe that the fee system described in Sections 11.2 and 11.3 of the CAT NMS Plan will result in an equitable and fair allocation of CAT-related fees between Participants, other types of Execution Venues, and Industry Members? Will the fee system in the Plan, including consideration of the distinctions in securities trading operations, impose higher costs upon or result in any competitive advantage to some types of Execution Venues or Industry Members as opposed to others? If yes, are those differences in fees appropriate and reasonable? Will this proposed fee system create incentives to execute orders in certain Execution Venues over others? What alternative fee systems, if any, would be more appropriate?

67. Do Commenters believe that assessing fees based on market share and message traffic, as described in Sections 11.2 and 11.3 of the CAT NMS Plan, is appropriate and reasonable? Specifically, is it appropriate and reasonable to base Industry Member fees on message traffic and Execution Venue fees on market share? Will this method of calculating fees impose higher costs upon or result in any competitive advantage to some types of Execution Venues or Industry Members as opposed to others? What fee calculation method, if any, would be more appropriate?

68. Are the tier levels appropriate and reasonable? Why or why not? Is the number of tiers contemplated (2–5 for Execution Venues and 5–9 for Industry Members) appropriate and reasonable? Why or why not?

69. Do Commenters believe that giving the right to the Operating Committee to change the fee tier assigned to any particular Person as set forth in Section 11.1(d) of the CAT NMS Plan is appropriate and reasonable? If not, why not? What alternative process, if any, would be more appropriate?

70. Do Commenters believe that giving the right to the Operating Committee to change the fee tier assigned to any particular Person as set forth in Section 11.1(d) of the CAT NMS Plan conflicts with the tier structure of fees as set forth in Section 11.2(c) of the CAT NMS Plan, which will be based on the market share for Execution Venues, and message traffic for Industry Members? Why or why not?

71. Section 11.1(d) of the CAT NMS Plan also provides that any change to a Person's fee tier will be effective upon reasonable notice to such Person. Do Commenters believe that a notice to any such Person is necessary, given that the CAT NMS Plan provides that a Person will change fee tiers based on market share or message traffic, as applicable? Why or why not? What should constitute reasonable notice?

72. Do Commenters believe the Operating Committee's ability to establish additional fees for "access and use of the CAT for regulatory and oversight purposes" (as described in Section 11.3(c) of the CAT NMS Plan) is appropriate and reasonable? Would this provision affect the ability of regulatory Staff to access and use the data in the Central Repository? If so, what additional or different provisions would mitigate the impact upon regulatory access to and use of the data?

73. Do Commenters believe that the funding provisions in Section 11.1 of the CAT NMS Plan provide sufficient authority and guidance to the Operating Committee to establish and maintain such reserves as are reasonably deemed appropriate by the Operating Committee for the prudent operation of the Company? If not, why not?

74. Do Commenters believe that the provisions in the CAT NMS Plan regarding the collection of fees (Section 11.4 of the CAT NMS Plan) and fee disputes (Section 11.5 of the CAT NMS Plan) are appropriate and reasonable? If not, what alternatives do Commenters suggest?

75. Do Commenters believe the CAT NMS Plan provides sufficient detail regarding the proposed cost allocation among the Plan Processor and regulators with respect to hardware and software costs that may be required in order to use CAT Data? If not, what are the risks of not providing sufficient detail and what requirements should be set forth in the CAT NMS Plan? For example, since there will only be one Plan Processor, what are the risks of significant costs for regulators to the extent regulators will need to contract with the Plan Processor for additional computing resources, storage costs and data transfer costs?

76. Should the Operating Committee be required to consult the Advisory Committee when setting fees and performing regular reviews of fees? Please explain.

(7) Amendments

Section 12.3 of the CAT NMS Plan, which governs amendments to the Plan, states that, except with respect to the addition of new Participants (Section 3.3), the transfer of Company Interest (Section 3.4), the termination of a Participant's participation in the Plan (Section 3.7), amendments to the Selection Plan (Section 5.3 [sic]) and special allocations (Section 8.2), any change to the Plan requires a written amendment authorized by the affirmative vote of not less than two-thirds of all of the Participants, or with respect to Section 3.8 by the affirmative vote of all the Participants. Such proposed amendment must be approved by the Commission pursuant to Rule 608 or otherwise becomes effective under Rule 608. Notwithstanding the foregoing, to the extent that the SEC grants exemptive relief applicable to any provision of this Agreement, Participants and Industry Members will be entitled to comply with such provision pursuant to the terms of the exemptive relief so granted at the time such relief is granted irrespective of whether the LLC Agreement has been amended.

(8) Compliance Rule Applicable to Industry Members

Under Article III, each Participant agrees to comply with and enforce compliance by its Industry Members with the provisions of Rule 613 and the Plan, as applicable, to the Participant and its Industry Members. Accordingly, the Participants will endeavor to promulgate consistent rules (after taking into account circumstances and considerations that may impact Participants differently) requiring compliance by their respective Industry Members with the provisions of Rule 613 and the Plan.

(9) Plan Appendices

The Plan includes three appendices.[81] Appendix A provides the Consolidated Audit Trail National Market System Plan Request for Proposal, as issued February 26, 2013 and subsequently updated. In addition, Rule 613(a)(1) requires that the Plan discuss twelve considerations that explain the choices made by the Participants to meet the requirements specified in Rule 613 for the CAT. In accordance with this requirement, the Participants have addressed each of the twelve considerations in Appendix C. Finally, Appendix D describes the technical requirements for the Plan Processor.

b. Governing or Constituent Documents

Rule 608 requires copies of all governing or constituent documents relating to any person (other than a self-regulatory organization) authorized to implement or administer such plan on behalf of its sponsors. The Participants will submit to the Commission such documents related to the Plan Processor when the Plan Processor is selected.

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[81] Appendix B is reserved for future use.

c. Development and Implementation Phases

The terms of the Plan will be effective immediately upon approval of the Plan by the Commission (the "Effective Date"). The Plan sets forth each of the significant phases of development and implementation contemplated by the Plan, together with the projected date of completion of each phase. These include the following, each of which is subject to orders otherwise by the Commission:

Within two months after the Effective Date, the Participants will jointly select the winning Shortlisted Bid and the Plan Processor pursuant to the process set forth in Article V. Following the selection of the Initial Plan Processor, the Participants will file with the Commission a statement identifying the Plan Processor and including the information required by Rule 608;

Within four months after the Effective Date, each Participant will, and, through its Compliance Rule, will require its Industry Members to, synchronize its or their Business Clocks and certify to the Chief Compliance Officer (in the case of Participants) or the applicable Participant (in the case of Industry Members) that it has met this requirement;

Within six months after the Effective Date, the Participants must jointly provide to the SEC a document outlining how the Participants could incorporate into the CAT information with respect to equity securities that are not NMS Securities,[82] including Primary Market Transactions in securities that are not NMS Securities, which document will include details for each order and Reportable Event that may be required to be provided, which market participants may be required to provide the data, the implementation timeline, and a cost estimate;

Within one year after the Effective Date, each Participant must report Participant Data to the Central Repository;

Within fourteen months after the Effective Date, each Participant must implement a new or enhanced surveillance system(s);

Within two years after the Effective Date, each Participant must, through its Compliance Rule, require its Industry Members (other than Small Industry Members) to report Industry Member Data to the Central Repository; and

Within three years after the Effective Date, each Participant must, through its Compliance Rule, require its Small Industry Members to provide Industry Member Data to the Central Repository.

In addition, Industry Members and Participants will be required to participate in industry testing with the Central Repository on a schedule to be determined by the Operating Committee. Furthermore, Appendix C, A Plan to Eliminate Existing Rules and Systems (SEC Rule 613(a)(1)(ix)), and Appendix D, Data Types and Sources, set forth additional implementation details concerning the elimination of rules and systems.

The Chief Compliance Officer will appropriately document objective milestones to assess progress toward the implementation of this Agreement.

Request for Comment

77. Under the CAT NMS Plan, the SROs' rules would require that their members become CAT Reporters. What mechanism should there be to ensure that all CAT Reporters would participate in all pre-implementation activities, including connectivity and testing? Please explain.

78. Do Commenters believe that the CAT NMS Plan allows for sufficient pre-implementation testing support for CAT Reporters, including providing CAT Reporter feedback and accuracy reports? If not, what requirements should be added to the CAT NMS Plan?

79. Do Commenters believe that full implementation of the CAT would allow for the retirement of OATS? Please explain. Are any identified gaps with respect to OATS' data elements not addressed in the CAT NMS Plan? If yes, what are they?

80. The CAT NMS Plan provides for a single Plan Processor. As such, do Commenters believe there are adequate and appropriate incentives for continuous CAT innovation and cost reductions by the Plan Processor and the Participants? If not, explain and describe what additional incentives may be implemented in the CAT NMS Plan or related documentation. What competition might be encouraged to lead to further innovations and reduced costs for future CAT technologies?

81. Do Commenters believe that the proposed CAT NMS Plan sets forth acceptable milestones to measure the progress of developing and implementing the CAT? Why or why not?

82. The CAT NMS Plan sets forth significant phases of development and implementation and a projected timetable for each stage. Are these projections appropriate and reasonable? If not, why not, and what is a more appropriate and reasonable timeline?

83. The CAT NMS Plan's "Access to the Central Repository for Regulators" Section[83] sets forth a milestone requiring the publication of the finalized document detailing methods of access to the Central Repository one (1) month before Participants are required to begin reporting. Do Commenters believe this allows sufficient time for Participants to build applications to access the Central Repository when CAT goes live? If not, please explain and describe any related modifications to this Section.

d. Analysis of Impact on Competition[84]

The Plan states that it does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Exchange Act. Section 8 of Appendix C, An Analysis of the Impact on Competition, Efficiency and Capital Formation, discusses the competition impact of the Plan in detail.[85] In addition, the Participants do not believe that the Plan introduces terms that are unreasonably discriminatory for the purposes of Section 11A(c)(1)(D) of the Exchange Act.[86] As noted in Section III.A.3.a, *supra*, the Participants are aware that potential conflicts of interest are raised because a Participant, or an Affiliate of a Participant, may be both submitting a Bid (or participating in a Bid (*e.g.*, as a subcontractor)) and participating in the evaluation of Bids to select the Plan Processor. As described in Section III.A.3.a, the Selection Plan previously approved by the Commission and incorporated in the Plan includes multiple provisions designed to mitigate the potential impact of these conflicts by imposing restrictions on the Voting Senior Officers and by requiring the recusal of Bidding Participants for certain votes taken by the Selection Committee.

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[82] In the Amendment to the CAT NMS Plan, Section 6.11 excludes OTC Equity Securities from the document the Participants would submit to the Commission, since the Participants plan to include OTC Equity Securities as well as NMS Securities in the initial phase in of CAT.

[83] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.10(d).

[84] The Commission reiterates that Section III.A of this Notice, including this subsection III.A.3.d, is substantially as prepared and submitted by the SROs to the Commission. The Commission's Economic Analysis in respect of the Plan's impact on competition is set forth in Section IV of this Notice.

[85] The Commission notes that as required under Rule 613(a)(1)(viii), the SROs set forth in the CAT NMS Plan a discussion of their analysis of the impact on competition, efficiency and capital formation of creating, implementing, and maintaining the CAT NMS Plan. *See* 17 CFR 242.613(a)(1)(viii) and CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8. The SROs' analysis in Section B.8 of Appendix C to the CAT NMS Plan, which is more detailed than as set forth in this Section III of this Notice, is organized as follows: (a) Impact on Competition—both for Participants and Broker-Dealers, (b) Impact on Efficiency, (c) Impact on Capital Formation, and (d) Impacts of the CAT NMS Plan Governance on Efficiency, Competition, and Capital Formation. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8. The Commission's analysis in respect of the Plan's impact on competition, efficiency and capital formation includes discussions of the SROs' analysis regarding the same and is in Section IV of this Notice. *See* Section IV.G, *infra*.

[86] 15 U.S.C. 78k–1(c)(1)(D).

e. Written Understanding or Agreements Relating to Interpretation of, or Participation in, the Plan

The Participants have no written understandings or agreements relating to interpretations of, or participation in, the Plan other than those set forth in the Plan itself. For example, Section 4.3(a)(iii) states that the Operating Committee only may authorize the interpretation of the Plan by Majority Vote, Section 6.9(c)(i) addresses interpretations of the Technical Specifications, and Section 8.2 addresses the interpretation of Sections 8.1 and 8.2. In addition, Section 3.3 sets forth how any entity registered as a national securities exchange or national securities association under the Exchange Act may become a Participant.

f. Dispute Resolution

The Plan does not include a general provision addressing the method by which disputes arising in connection with the operation of the Plan will be resolved. The Plan does, however, provide the means for resolving disputes regarding the Participation Fee. Specifically, Article III states that, in the event that the Company and a prospective Participant do not agree on the amount of the Participation Fee, such amount will be subject to the review by the SEC pursuant to Section 11A(b)(5) of the Exchange Act.[87] In addition, the Plan addresses disputes with respect to fees charged to Participants and Industry Members pursuant to Article XI. Specifically, such disputes will be determined by the Operating Committee or a Subcommittee designated by the Operating Committee. Decisions by the Operating Committee or such designated Subcommittee on such matters will be binding on Participants and Industry Members, without prejudice to the rights of any Participant or Industry Member to seek redress from the SEC pursuant to Rule 608 or in any other appropriate forum.

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This marks the end of the statement of purpose as set forth above and as substantially prepared and submitted by the SROs.

B. Summary of Additional CAT NMS Plan Provisions and Request for Comment

The Commission requests and encourages any interested person to comment generally on the proposed CAT NMS Plan. In addition to the specific requests for comment throughout the release, the Commission requests general comment on all aspects of the proposed CAT NMS Plan. The Commission encourages Commenters to provide information regarding the advantages and disadvantages of each aspect of the proposed CAT NMS Plan. The Commission invites Commenters to provide views and data as to the costs and benefits associated with the proposed CAT NMS Plan. The Commission also seeks comment regarding other matters that may have an effect on the proposed CAT NMS Plan.

1. Reporting Procedures

The CAT NMS Plan requires CAT Reporters to comply with specific reporting procedures when reporting CAT Data to the Central Repository.[88] Specifically, CAT Reporters must format CAT Data to comply with the format specifications approved by the Operating Committee.[89] CAT Reporters must record CAT Data contemporaneously with the applicable Reportable Event[90] and report such data to the Central Repository by 8:00 a.m. Eastern Time on the next Trading Day.[91] The obligation to report CAT Data applies to "each NMS Security registered or listed for trading on [a national securities] exchange or admitted to unlisted trading privileges on such exchange," and "each Eligible Security for which transaction reports are required to be submitted to such [national securities] association."[92] Further, the Participants are required to adopt Compliance Rules[93] that require Industry Members, subject to their SRO jurisdiction, to report CAT Data.[94]

The CAT NMS Plan requires specific data elements of CAT Data that must be recorded and reported to the Central Repository upon: (i) "original receipt or origination of an order,"[95] (ii) "routing of an order,"[96] and (iii) "receipt of an order that has been routed."[97] Additionally, the CAT NMS Plan requires that a CAT Reporter must record and report data related to an "order [that] is modified or cancelled,"[98] and an "order [that] is executed, in whole or in part,"[99] as well

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[87] 15 U.S.C. 78k–1(b)(5).

[88] *See* CAT NMS Plan, *supra* note 3, at Sections 6.3–6.4; Appendix D, at Section 2.1.

[89] *See id.* at Sections 6.3(a), 6.4(a). The CAT NMS Plan also requires that the Operating Committee-approved format must be a format specified by the Plan Processor and Rule 613 compliant.

[90] *See id.* at Section 6.3(b)(i) and Section 6.4(b)(i).

[91] *See id.* at Section 6.3(b)(ii), Section 6.4(b)(ii), and Appendix C, Section A.1(a)(ii). Participants may voluntarily report CAT Data prior to the 8:00 a.m. Eastern Time deadline. *Id.* The CAT NMS Plan defines "Trading Day" as the date "as is determined by the Operating Committee." The CAT NMS Plan also provides that "the Operating Committee may establish different Trading Days for NMS Stocks (as defined in SEC Rule 600(b)(47), Listed Options, OTC Equity Securities, and any other securities that are included as Eligible Securities from time to time." *Id.* at Section 1.1.

[92] *See id.* at Section 6.3(c)(i)–(ii) and Section 6.4(c)(i)–(ii).

[93] The CAT NMS Plan defines the "Compliance Rule" to mean "with respect to a Participant, the rules promulgated by such Participant as contemplated by Section 3.11." *Id.* at Section 1.1. Section 3.11 of the CAT NMS Plan provides that "each Participant shall comply with and enforce compliance, as required by SEC Rule 608(c), by its Industry Members with the provisions of SEC Rule 613 and of [the LLC Agreement], as applicable, to the Participant and its Industry Members. The Participants shall endeavor to promulgate consistent rules (after taking into account circumstances and considerations that may impact Participants differently) requiring compliance by their respective Industry Members with the provisions of SEC Rule 613 and [the LLC Agreement]." *Id.* at Section 3.11.

[94] *See id.* at Section 6.4(c)(i)–(ii).

[95] For "original receipt or origination of an order," the CAT NMS Plan specifies the following data elements: (i) Firm Designated ID(s) for each Customer; (ii) CAT-Order-ID; (iii) SRO-Assigned Market Participant Identifier of the Industry Member receiving or originating the order; (iv) date of order receipt or origination; (v) time of order receipt or origination (using time stamps pursuant to Section 6.8 of the CAT NMS Plan); and (vi) Material Terms of the Order. *Id.* at Section 6.3(d)(i).

[96] For "routing of an order," the CAT NMS Plan specifies the following data elements: (i) CAT-Order-ID; (ii) date on which the order is routed; (iii) time at which the order is routed (using time stamps pursuant to Section 6.8 of the CAT NMS Plan); (iv) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order; (v) SRO-Assigned Market Participant Identifier of the Industry Member or Participant to which the order is being routed; (vi) if routed internally at the Industry Member, the identity and nature of the department or desk to which the order is routed; and (vii) Material Terms of the Order. *Id.* at Section 6.3(d)(ii).

[97] For "receipt of an order that has been routed," the CAT NMS Plan specifies the following data elements: (i) CAT-Order-ID; (ii) date on which the order is received; (iii) time at which the order is received (using time stamps pursuant to Section 6.8); (iv) SRO-Assigned Market Participant Identifier of the Industry Member or Participant receiving the order; (v) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order; and (vi) Material Terms of the Order. *Id.* at Section 6.3(d)(iii).

[98] For an "order [that] is modified or cancelled," the CAT NMS Plan specifies the following data elements: (i) CAT-Order-ID; (ii) date the modification or cancellation is received or originated; (iii) time at which the modification or cancellation is received or originated (using time stamps pursuant to Section 6.8 of the CAT NMS Plan); (iv) price and remaining size of the order, if modified; (v) other changes in the Material Terms of the Order, if modified; and (vi) whether the modification or cancellation instruction was given by the Customer or was initiated by the Industry Member or Participant. *Id.* at Section 6.3(d)(iv).

[99] For an "order [that] is executed, in whole or in part," the CAT NMS Plan specifies the following data elements: (i) CAT-Order-ID; (ii) date of execution; (iii) time of execution (using time stamps pursuant to Section 6.8 of the CAT NMS Plan); (iv) execution capacity (principal, agency or riskless principal); (v) execution price and size; (vi) SRO-

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as "other information or additional events as may be prescribed in Appendix D, Reporting and Linkage Requirements."[100] The CAT NMS Plan also requires Industry Member CAT Reporters to report additional data elements for (i) an "order [that] is executed, in whole or in part,"[101] (ii) a "trade [that] is cancelled,"[102] or (iii) "original receipt or origination of an order."[103] Further, each Participant shall, through Compliance Rules, require Industry Members to record and report to the Central Repository information or additional events as may be prescribed to accurately reflect the complete lifecycle of each Reportable Event.[104]

Request for Comment

84. Do Commenters believe that the data recording, reporting, and formatting procedures described in the CAT NMS Plan are appropriate and reasonable? Would providing additional details or requirements on these procedures enhance the quality of CAT Data reported to the Central Repository or the efficiency and cost-effectiveness of the CAT?

85. Do Commenters believe that the CAT NMS Plan, including Appendix D thereto, requires sufficient outreach, support, training, guidance and/or documentation to ensure that CAT Reporters are able to make data transmissions to the Central Repository that are complete and timely? If not, please explain. Describe what, if any, further requirements may be needed.

86. Do Commenters believe that the CAT NMS Plan should have a formal communications plan, other than the public Web site, to provide CAT Reporters the information they would need in order to set-up or configure their systems to record and report CAT Data to the Central Repository? If so, how, when, and by whom should such information be disseminated to CAT Reporters?

87. Do Commenters believe the Plan should require a specific method for entering CAT Data upon each CAT Reportable Event or upon updates and corrections to CAT Reportable Events? If so, what method? Please explain.

88. Do Commenters believe that the CAT NMS Plan should include a requirement that the Participants and the Plan Processor set forth a more detailed schedule, with milestones, for CAT Reporters to adhere to in setting-up or configuring their systems to become CAT Data reporting compliant? If so, please explain and describe what details and milestones should be included in the schedule (*e.g.*, publication of Technical Specifications and announcements of CAT Reporter-facing technology changes).

2. Timeliness of Data Reporting

Section 6.3(b)(ii) of the CAT NMS Plan requires each Participant to report Participant Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Participant records such data.[105] Additionally, a Participant may voluntarily report such data prior to this deadline.[106] Section 6.4(b)(ii) states that each Participant shall, through its Compliance Rule, require its Industry Members to report Recorded Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry member records such data, and Received Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member receives such data.[107] Section 6.4(b)(ii) of the CAT NMS Plan also states that each Participant shall, through its Compliance Rule, permit its Industry Members to voluntarily report such data prior to the applicable 8:00 a.m. Eastern Time deadline.[108]

Request for Comment

89. The CAT NMS Plan requires that all Participants report Participant Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Participant records such data,[109] and that Industry Members report Recorded Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member records such data[110] and Received Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member receives such data.[111] Do Commenters believe that the CAT NMS Plan provides sufficient detail and information to determine whether the applicable 8:00 a.m. Eastern Time data reporting deadlines provided in the CAT NMS Plan are achievable? If not, why not?

90. Do Commenters believe that CAT Reporters will submit their reports at or about the same time? If all or most of the CAT Reporters would report at or just before 8:00 a.m. Eastern Time, what, if any, impact would there be on the necessary CAT infrastructure? Would this place an excessive burden on the Plan Processor? Do Commenters believe this would increase operational risk and/or increase costs? If so, please explain. Are there alternative reporting mechanisms that could reduce such risks?

91. The CAT NMS Plan provides that the Plan Processor must be able to handle two times the historical peak data to ensure that, if a significant number of CAT Reporters choose to submit data at or around the same time, the Plan Processor could handle the influx of data.[112] Do Commenters believe that the SROs' estimate of capacity is sufficient? If not, why not and what capacity should be required?

92. Do Commenters believe that the CAT NMS Plan allocates, or requires the Plan Processor to have, sufficient resources to work with the approximately 1,800 CAT Reporters that would, under the CAT NMS Plan, have to establish secure connections over which CAT Data will flow from their systems to the Central Repository? Do Commenters believe that the Plan Processor could implement the CAT Reporters' Central Repository connections nearly simultaneously without compromising testing periods and implementation timelines?

3. Uniform Format

The CAT NMS Plan does not mandate the format in which data must be reported to the Central Repository.[113] Appendix D states that the Plan

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Assigned Market Participant Identifier of the Participant or Industry Member executing the order; and (vii) whether the execution was reported pursuant to an effective transaction reporting plan or the Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information. *Id.* at Section 6.3(d)(v).

[100] *See id.* at Section 6.3(d)(vi).

[101] For an "order [that] is executed, in whole or in part," the CAT NMS Plan specifies the following additional data elements: (i) An Allocation Report; (ii) SRO-Assigned Market Participant Identifier of the clearing broker or prime broker, if applicable; and (iii) CAT-Order-ID of any contra-side order(s). *Id.* at Section 6.4(d)(ii)(A).

[102] For a "trade [that] is cancelled," the CAT NMS Plan specifies the following additional data element: A cancelled trade indicator. *Id.* at Section 6.4(d)(ii)(B).

[103] For "original receipt or origination of an order," the CAT NMS Plan specifies the following additional data element(s): The Firm Designated ID, Customer Account Information, and Customer Identifying Information for the relevant Customer. *Id.* at Section 6.4(d)(ii)(C).

[104] *Id.* at Appendix D, Section 3.

[105] *See* CAT NMS Plan, *supra* note 3, at Section 6.3(b)(ii); *see also id.* at Appendix C, Section A.1(a)(ii); Appendix D, Sections 3.1, 6.1.

[106] *Id.* at Section 6.3(b)(ii).

[107] *Id.* at Section 6.4(b)(ii).

[108] *Id.*

[109] *Id.* at Section 6.3(b)(ii).

[110] *Id.* at Section 6.4(b)(ii).

[111] *Id.*

[112] *Id.* at Appendix C, Section A.1(a)(ii); *see also id.* at Section IV.H.2.g., *infra*.

[113] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(f); *see also id.* at Appendix C, Section A.1(a).

Processor will determine the electronic format in which data must be reported, and that the format will be described in the Technical Specifications.[114] Appendix C specifies that CAT Reporters could be required to report data either in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format, for consolidation and storage.[115] Similarly, Sections 6.3(a) and 6.4(a) of the CAT NMS Plan require that CAT Reporters report data to the Central Repository in a format or formats specified by the Plan Processor, approved by the Operating Committee, and compliant with Rule 613.[116]

The CAT NMS Plan requires that data reported to the Central Repository be stored in an electronic standard format.[117] Specifically, Section 6.5(b)(i) of the CAT NMS Plan requires the Central Repository to retain the information collected pursuant to Rule 613(c)(7) and (e)(7) in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention by the Plan Processor for a period of not less than six (6) years.[118] Such data must be linked when it is made available to the Participant's regulatory Staff and the Commission.[119]

Request for Comment

93. The CAT NMS Plan provides that CAT Reporters could be required to report data either in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format, for consolidation and storage. Do Commenters believe that if data is reported to the Central Repository in a non-uniform format, the proposed CAT NMS Plan includes sufficient requirements or details to determine whether the Central Repository could reliably and accurately convert such data to a uniform electronic format, for consolidation and storage, without affecting the quality of the data? If not, what additional requirements or details should be provided in the CAT NMS Plan prior to the Commission's approval of such plan?

94. If Commenters believe that it is not necessary to provide additional requirements or details, if any, in the CAT NMS Plan, what additional requirements or details should be included in the Technical Specifications to determine whether the Central Repository could reliably and accurately convert such data to a uniform electronic format, for consolidation and storage?

95. Do Commenters believe the CAT NMS Plan's lack of a mandated uniform format in which data must be reported to the Central Repository would affect the accuracy of CAT Data collected and maintained under the CAT? If so, how? Would reporting data in a uniform format result in greater accuracy? If so, please explain.

96. Do Commenters believe the CAT NMS Plan's lack of a mandated uniform format in which data must be reported to the Central Repository would affect the completeness of CAT Data collected and maintained under the CAT? If so, how? Would reporting data in a uniform format result in more complete CAT Data? If so, please explain.

97. Do Commenters believe the CAT NMS Plan's lack of a mandated uniform format in which data must be reported to the Central Repository would affect the accessibility of CAT Data collected and maintained under the CAT? If so, how? Would reporting data in a uniform format result in a different level of accessibility? If so, please explain.

98. Do Commenters believe allowing CAT Reporters to report data to the Central Repository in a non-uniform format would affect the timeliness of data collected and maintained under the CAT? How would the requirement that the Central Repository convert non-uniform data to a uniform format affect the timeliness of the data collected and maintained under the CAT? Would reporting data in a uniform format result in a different level of timeliness of data reporting? If so, please explain.

99. Do Commenters believe that allowing CAT Reporters to report data to the Central Repository in a non-uniform format is more efficient and cost-effective than requiring data to be reported in a uniform format? Would allowing CAT Reporters to report data to the Central Repository in a non-uniform format merely transfer the costs from individual CAT Reporters to the Central Repository? Would centralization of the costs of converting data to a uniform format reduce costs? Please explain.

100. Do Commenters believe that allowing CAT Reporters to report data to the Central Repository in a non-uniform format would affect the security and confidentiality of CAT Data? If so, how? Would reporting data in a uniform format create different security or confidentiality concerns? If so, please explain.

4. Clock Synchronization

Pursuant to Section 6.8(a) of the CAT NMS Plan, each Participant and Industry Member, (through the Compliance Rule adopted by every Participant), must synchronize its Business Clocks,[120] at a minimum, to within 50 milliseconds of the time maintained by the NIST, consistent with industry standards.[121] The Participants believe that a 50-millisecond clock offset tolerance represents the current industry clock synchronization standard.[122] Industry Members must maintain such a clock synchronization standard; certify periodically (according to a schedule to be defined by the Operating Committee) that their Business Clocks meet the requirements of the Compliance Rule; and report to the Plan Processor and the Participant any violation of the Compliance Rule pursuant to the thresholds set by the Operating Committee.[123] Pursuant to Section 6.8(c) of the CAT NMS Plan, the Chief Compliance Officer, in conjunction with the Participants and other appropriate Industry Member advisory groups, annually must evaluate and make a recommendation to the Operating Committee as to whether the industry standard has evolved such that the clock synchronization standard should be tightened.[124]

Appendix C describes the process by which Participants determined that a 50-millisecond clock offset tolerance was consistent with industry standards.[125] To that end, the Participants and Industry Members reviewed their respective internal clock synchronization technology practices,[126] and reviewed the results of The Financial Information Forum ("FIF") Clock Offset Survey, a clock synchronization survey conducted by FIF.[127] In light of their internal reviews

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[114] *Id.* at Appendix D, Section 2.1. Appendix D states that more than one format may be allowed to support the various market participants that would report information to the Central Repository. *Id.; see also id.* at Section 6.9.

[115] *Id.* at Appendix C, Section A.1(b).

[116] *Id.* at Section 6.3(a) and Section 6.4(a).

[117] Pursuant to the Plan, for data consolidation and storage, as noted above, such data must be reported in a uniform electronic format or in a manner that would allow the Central Repository to convert the data to a uniform electronic format. *Id.* at Appendix C, Section A.1(b).

[118] *Id.* at Section 6.5(b)(i).

[119] *Id.*

[120] The CAT NMS Plan defines a "Business Clock" to mean "a clock used to record the date and time of any Reportable Event required to be reported under SEC Rule 613." *Id.* at Section 1.1.

[121] *Id.* at Section 6.8(a)(i)–(ii).

[122] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[123] *Id.* at Section 6.8(a)(ii).

[124] *Id.* at Section 6.8(c).

[125] *Id.* at Appendix C, Section D.12(p).

[126] *Id.*

[127] *Id.* at Appendix C, n.236. *See* Financial Information Forum, FIF Clock Offset Survey Preliminary Report (February 17, 2015), *available at http://www.catnmsplan.com/industryfeedback/*

Continued

and the FIF Clock Offset Survey, the Participants concluded that a clock offset tolerance of 50 milliseconds represented an aggressive but achievable standard.[128]

Appendix C discusses mechanisms to ensure compliance with the 50-millisecond clock offset tolerance.[129] The Participants anticipate that they and Industry Members will adopt policies and procedures to verify the required clock synchronization each trading day before the market opens, as well as periodically throughout the trading day.[130] The Participants also anticipate that they and Industry Members will document their clock synchronization procedures and maintain a log recording the time of each clock synchronization performed, and the result of such synchronization, specifically identifying any synchronization revealing any clock offset between the Participant's or Industry Member's Business Clock and the time maintained by the NIST exceeding 50 milliseconds.[131] The CAT NMS Plan states that once both large and small broker-dealers begin reporting to the Central Repository, and as clock synchronization technology matures further, the Participants will assess, in accordance with Rule 613, tightening CAT's clock synchronization standards to reflect changes in industry standards.[132]

Request for Comment [133]

101. Do Commenters believe that a clock offset tolerance of 50 milliseconds is appropriate and reasonable, in light of the increase in the speed of trading over the last several years? If not, what would an appropriate and reasonable standard be?

102. What are current clock synchronization practices? Do Commenters believe that current industry clock synchronization practices are sufficiently rigorous in light of current trading speeds? If not, please explain.

103. Would a smaller clock offset tolerance be reasonably achievable? If so, please identify such tolerance and any incremental additional costs that achieving that smaller clock offset tolerance might entail.

104. If Commenters believe that, in light of the current speed of trading, the clock offset tolerance should be more rigorous, what, if any transition period would be reasonable and appropriate for reducing the clock offset tolerance standards of CAT?

105. What is the range of clock synchronization practices across the industry?

106. Do Commenters believe the range of clock synchronization practices should be considered when considering the appropriate clock synchronization standard?

107. If an SRO or broker-dealer can or does synchronize its clocks to an offset tolerance more rigorous than 50 milliseconds, do Commenters believe that that SRO or broker-dealer should be required to synchronize its clocks to that standard? Why or why not? If so, how, if at all, would that affect sequencing of Reportable Events in CAT?

108. Do Commenters believe that certain categories of market participants should be held to a smaller or larger clock offset tolerance? If so, what category of market participant and why? How, if at all, would that affect sequencing of Reportable Events in CAT?

109. Do Commenters believe a 50-millisecond clock offset tolerance would materially impair the quality and accuracy of CAT Data? If so, please explain. Would such a standard undermine the ability of the Central Repository to accurately and reliably link order and sequence event data across venues, or combine it with other sources of trade and order data? If so, please explain. Is there a benefit from applying the same uniform clock offset tolerance to all market participants, or would a variable clock offset tolerance approach be preferable? For example, should a high-volume market participant trading on multiple exchanges and ATSs have the same clock offset tolerance as a small retail-focused regional office? Would the benefits of a smaller clock offset tolerance for service bureaus that report but do not record order events be lower than for other types of CAT Reporters? Would the benefits of a smaller clock offset tolerance for clearing brokers that record and report information available only after an execution be lower than for other types of CAT Reporters? Please explain.

110. The CAT NMS Plan provides that as time synchronization standards evolve, the Participants would assess, on an annual basis, the ability to tighten the clock synchronization standards for CAT to reflect changes in industry standards. Do Commenters believe that this would establish an appropriately rigorous process and schedule for the Participants to evaluate whether the clock synchronization standard should be tightened? Are there any other factors that should affect when and how to tighten the clock synchronization standard?

111. Do Commenters believe the CAT NMS Plan provides adequate enforcement provisions to ensure CAT Reporters synchronize Business Clocks within the proposed 50-millisecond clock offset tolerance? If not, what additional enforcement provisions should the CAT NMS Plan provide?

112. Do Commenters believe that sufficient detail has been provided in the CAT NMS Plan concerning the reasonable justification or exceptional circumstances that would permit a pattern or practice of reporting events outside of the specified clock synchronization standard?

113. The CAT NMS Plan generally requires CAT Reporters to record and report Reportable Events with a time stamp of at least to the millisecond but provides for a 50 millisecond clock offset tolerance. Do Commenters believe the time stamp granularity requirement and the clock offset tolerance should correspond more closely or even identically? If so, please explain, including what such time stamp granularity requirement and clock offset tolerance should be.

5. Time Stamp Granularity

The CAT NMS Plan requires CAT Reporters to record and report the time of each Reportable Event using time stamps reflecting current industry standards, which should be at least to the millisecond, except with respect to events that involve non-electronic communication of information ("Manual Order Events").[134] Furthermore, the Plan requires

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p602479.pdf and http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p602479.pdf. ("FIF Clock Offset Study").

[128] *Id.* The Participants note in Appendix C that according to the FIF Clock Offset Survey, annual maintenance costs would escalate to 102%, 123% and 242% if clock synchronization standards moved to 5 milliseconds, 1 millisecond and 100 microseconds, respectively, indicating that maintenance costs rapidly escalate as clock synchronization standards increase beyond 50 milliseconds. *Id.*

[129] *See id.* at Appendix C, Section A.3(c).

[130] *See id.*

[131] *See id.* It was noted that such a log would include results for a period of not less than five years ending on the then current date. *Id.*

[132] *See id.* at Appendix C, Section D.12(p).

[133] *See* Sections IV.D.3, IV.E.4 and IV.H.5, *infra*, for further clock synchronization related requests for comment.

[134] *See* CAT NMS Plan, *supra* note 3, at Section 1.1. The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit CAT Reporters to report Manual Order Events with a time stamp granularity of one second, in lieu of a time stamp granularity of one millisecond. *See* Exemptive Request Letter, *supra* note 16, at 34. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

Participants to adopt rules requiring that CAT Reporters that use time stamps in increments finer than milliseconds use those finer increments when reporting to the Central Repository.[135] For Manual Order Events, the Participants determined that time stamp granularity at the level of a millisecond is not practical.[136] Accordingly, the CAT NMS Plan provides that each Participant and Industry Member shall be permitted to record and report Manual Order Events to the Central Repository in increments up to and including one second, provided that Participants and Industry Members shall be required to record and report the time when a Manual Order Event has been captured electronically in an order handling and execution system of such Participant or Industry Member ("Electronic Capture Time") in milliseconds.[137]

Request for Comment[138]

114. Are the time stamp granularity standards for both electronic and non-electronic reportable events appropriate and reasonable? If not, why not and what would be a better alternative?

115. Do Commenters believe the CAT NMS Plan's time stamp granularity requirement is precise enough to reliably and accurately sequence Reportable Events? If not, why not? Is there a better time stamp approach and what should the requirement(s) be?

116. To what degree does the millisecond or less time stamp granularity requirement enable or prevent regulators' ability to sequence events that occur in different execution venues? Please explain.

117. Are certain CAT Reportable Events more time-sensitive than other CAT Reportable Events? If so, what events are more time-sensitive and why? What systems are more likely to process these more sensitive events and to what level of time stamp granularity are such events processed? Where are those systems located (*i.e.*, within broker-dealers, service bureaus, execution venues)? Please explain.

118. What market participant systems, if any, should have less granular time stamp requirements? Why? What time stamp granularity standard should these systems have? Why?

119. What market participant systems, if any, should have more granular time stamp requirements? Why? What time stamp granularity standard should these systems have? Why?

120. The Commission granted an exemption from Rule 613 in order to allow the alternative of permitting CAT Reporters to report Manual Order Events with a time stamp granularity of one second, in lieu of the Rule 613 requirement that the CAT NMS Plan require CAT Reporters to report with a time stamp granularity of one millisecond, to be included in the CAT NMS Plan and subject to notice and comment.[139] Do Commenters believe that the CAT NMS Plan's one-second time stamp granularity standard for Manual Order Events is appropriate and reasonable? If not, why not? Would a more granular time stamp requirement for Manual Order Events be feasible?

121. What alternative approach with respect to Manual Order Events may be preferable? Could the provisions in the CAT NMS Plan related to Manual Order Events be more narrowly tailored to, for example, only apply to CAT Reporters who are unable to record and report Manual Order Events with a time stamp granularity of one millisecond?

122. The SROs note in the Exemption Request that recording and reporting Manual Order Events with a time stamp granularity of at least one second would result in little additional benefit, and, in fact, could result in adverse consequences such as creating a false sense of precision for data that is inherently imprecise, while imposing additional costs on CAT Reporters. Do Commenters agree? Why or why not?

123. If Manual Order Events are recorded and reported with a time stamp granularity of one second, what, if any, challenges do Commenters believe would arise with respect to the sequencing of order events (for the same order) and orders (for a series of orders)? Would the one millisecond standard originally provided for in Rule 613 be preferable? Please explain.

124. Do Commenters believe the CAT NMS Plan's requirement that time stamp granularity (other than for Manual Order Events) should be to at least the millisecond is granular enough in light of current practices? If not, why not?

125. The CAT NMS Plan provides that as time stamp standards evolve, the Participants would assess, on an annual basis, the ability to require more precise time stamp granularity standards for CAT to reflect changes in industry standards. Do Commenters believe that this establishes an appropriately rigorous schedule for the Participants to evaluate whether time stamp granularity requirements could potentially be set to finer increments? Are there any other factors that should affect when and how the requirements for time stamp granularity increments could be made more precise?

126. Do Commenters believe the CAT NMS Plan provides adequate enforcement provisions to ensure CAT Reporters time stamp Reportable Events to a granularity of one millisecond (and for Manual Order Events to a granularity of one second)? If not, what additional enforcement provisions should the CAT NMS Plan provide?

127. Do Commenters believe that the CAT NMS Plan's requirement that Participants and Industry Members synchronize Business Clocks used solely for Manual Order Events to within one second of the time maintained by the NIST is appropriate and reasonable? Would a tighter clock synchronization standard for Business Clocks used solely for Manual Order Events be feasible?

6. CAT-Reporter-ID

Sections 6.3 and 6.4 of the CAT NMS Plan require CAT Reporters to record and report to the Central Repository an SRO-Assigned Market Participant Identifier[140] for orders and certain Reportable Events to be used by the Central Repository to assign a unique CAT-Reporter-ID[141] for purposes of identifying each CAT Reporter associated with an order or Reportable Event (the "Existing Identifier Approach").[142] The CAT NMS Plan requires the reporting of SRO-Assigned Market Participant Identifiers of: The Industry Member receiving or originating an order; [143] the Industry Member or Participant from which (and to which) an order is being routed; [144] the Industry Member or Participant receiving (and routing) a routed order; [145] the Industry Member or Participant executing an order, if an order is executed; [146] and the clearing broker or prime broker, if applicable, if an order is executed.[147] An Industry Member would report to the Central Repository its existing SRO-Assigned Market Participant Identifier used by the relevant SRO specifically for transactions occurring at that SRO.[148] Similarly, an exchange reporting CAT Reporter information would report data using the SRO-Assigned Market Participant Identifier used by the Industry Member on that exchange or its systems.[149] Over-the-counter ("OTC") orders and Reportable Events would be reported with an Industry Member's FINRA SRO-Assigned Market Participant Identifier.[150]

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[135] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[136] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c). The Participants state that they received industry feedback through the DAG that suggests that the established business practice with respect to Manual Order Events is to manually capture time stamps with granularity at the level of a second because finer increments cannot be accurately captured when dealing with manual processes which, by their nature, take longer to perform than a time increment of under one second. *Id.* The Participants agree that, due to the nature of transactions originated over the phone, it is not practical to attempt granularity finer than one second, as any such finer increment would be inherently unreliable. *Id.*

[137] *See* CAT NMS Plan, *supra* note 3, at Section 6.8(b).

[138] *See* Section IV.D.3, *infra*, for further time stamp granularity related requests for comment.

[139] *See* Exemption Order, *supra* note 18.

[140] The CAT NMS Plan defines an "SRO-Assigned Market Participant Identifier" as "an identifier assigned to an Industry Member by an SRO or an identifier used by a Participant." *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[141] Rule 613 defines a CAT-Reporter-ID as "a code that uniquely and consistently identifies [a CAT Reporter] for purposes of providing data to the central repository." 17 CFR 242.613(j)(2).

[142] The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit the Existing Identifier Approach, which would allow a CAT Reporter to report an existing SRO-Assigned Market Participant Identifier in lieu of requiring the reporting of a universal CAT-Reporter-ID. *See* Exemptive Request Letter, *supra* note 16, at 19. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

The CAT NMS Plan requires the Plan Processor to develop and maintain the mechanism to assign (and to change, if necessary) CAT-Reporter-IDs.[151] For the Central Repository to link the SRO-Assigned Participant Identifier to the CAT-Reporter-ID, each SRO must submit, on a daily basis, all SRO-Assigned Market Participant Identifiers used by its Industry Members (or itself), as well as information to identify the corresponding market participant (for example, a CRD number or Legal Entity Identifier ("LEI")) to the Central Repository.[152] Additionally, each Industry Member shall be required to submit to the Central Repository information sufficient to identify such Industry Member (*e.g.*, CRD number or LEI, as noted above).[153] The Plan Processor would use the SRO-Assigned Market Participant Identifiers and identifying information (*i.e.*, CRD number or LEI) to assign a CAT-Reporter-ID to each Industry Member and SRO for internal use across all data within the Central Repository.[154] The Plan Processor would create and maintain a database in the Central Repository that would map the SRO-Assigned Market Participant Identifiers to the appropriate CAT-Reporter-ID.[155]

The consolidated audit trail must be able to capture, store, and maintain current and historical SRO-Assigned Market Participant Identifiers.[156] The SRO-Assigned Market Participant Identifier must also be included on the Plan Processor's acknowledgment of its receipt of data files from a CAT Reporter or Data Submitter,[157] on daily statistics provided by the Plan Processor after the Central Repository has processed data,[158] and on a secure Web site that the Plan Processor would maintain that would contain each CAT Reporter's daily reporting statistics.[159] In addition, data validations by the Plan Processor must include confirmation of a valid SRO-Assigned Market Participant Identifier.[160]

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128. The Commission granted an exemption from Rule 613 in order to allow the Existing Identifier Approach to be included in the CAT NMS Plan and subject to notice and comment. The Existing Identifier Approach would allow a CAT Reporter to report an existing SRO-Assigned Market Participant Identifier in lieu of Rule 613's requirement that a CAT Reporter must report a universal CAT-Reporter-ID.[161] Do Commenters believe that allowing the Existing Identifier Approach would be more efficient and cost-effective than the Rule 613 approach of requiring a CAT-Reporter-ID to be reported for each order and reportable event in accordance with Rule 613(c)(7)? [162] Why or why not? Or do Commenters believe that the Rule 613 approach is preferable? Why or why not? Would implementation of the Existing Identifier Approach merely transfer costs from CAT Reporters to the Central Repository?

129. Do Commenters believe that the Existing Identifier Approach would affect the accuracy of CAT Data? Would the Rule 613 approach result in greater accuracy? If so, please explain.

130. Do Commenters believe that the CAT NMS Plan's proposed Existing Identifier Approach would affect the accessibility of CAT Data? If so, how? Would the Rule 613 approach result in a different level of accessibility? If so, please explain.

131. Do Commenters believe that the CAT NMS Plan's proposed Existing Identifier Approach would affect the timeliness of CAT Data? If so, how? Would the Rule 613 approach result in greater timeliness? If so, please explain.

132. Do Commenters believe the Existing Identifier Approach would affect the security and confidentiality of CAT Data? If so, how? Would the Rule 613 approach result in a different level of security and confidentiality? If so, please explain.

133. What challenges or risks do Commenters believe the Plan Processor would face in linking all SRO-Assigned Market Participant Identifiers to the appropriate CAT-Reporter-IDs? What, if anything, could be done to mitigate those challenges and risks?

134. The CAT NMS Plan does not require that an Industry Member provide its LEI to the Plan Processor as part of the identifying information used to assign a CAT-Reporter-ID. The CAT NMS Plan permits an Industry Member to report its CRD number in lieu of its LEI for this purpose. Do Commenters believe that the CAT NMS Plan should mandate that Industry Members provide their LEIs, along with their SRO-Assigned Market Participant Identifiers, to the Plan Processor for purposes of developing a unique CAT-Reporter-ID? Why or why not?

7. Customer-ID

a. Customer Information Approach

Rule 613(c)(7)(i)(A) requires that for the original receipt or origination of an order, a CAT Reporter report the "Customer-ID(s) for each Customer." [163] "Customer-ID" is defined in Rule 613(j)(5) to mean "with respect to a customer, a code that uniquely and consistently identifies such customer for purposes of providing data to the Central Repository."[164] Rule 613(c)(8) requires that "[a]ll plan sponsors and their members shall use the same Customer-ID and CAT-Reporter-ID for each customer and broker-dealer."[165]

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[143] *See* CAT NMS Plan, *supra* note 3, at Section 6.3(d)(i) and Section 6.4(d)(i).

[144] *Id.* at Section 6.3(d)(ii) and Section 6.4(d)(i).

[145] *Id.* at Section 6.3(d)(iii) and Section 6.4(d)(i).

[146] *Id.* at Section 6.3(d)(v) and Section 6.4(d)(i).

[147] *Id.* at Section 6.4(d)(ii)(A)(2). Industry Members are required by the CAT NMS Plan to record and report this information. *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(ii).

[148] *See* Exemption Order, *supra* note 18, at 31–41.

[149] *See id.* at 20.

[150] *Id.*

[151] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 10.1. Changes to CAT-Reporter-IDs must be reviewed and approved by the Plan Processor. *Id.* The CAT NMS Plan also requires the Central Repository to generate and assign a unique CAT-Reporter-ID to all reports submitted to the system based on sub-identifiers that are currently used by CAT Reporters in their order handling and trading processes (described in the Exemption Request as SRO-assigned market participant identifiers). *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3; *see also* Exemption Order, *supra* note 18, at 31–41.

[152] *See* CAT NMS Plan, *supra* note 3, at Section 6.3(e)(i).

[153] *Id.* at Section 6.4(d)(vi).

[154] *See* Exemption Order, *supra* note 18, at 31–41.

[155] *Id.* at 20.

[156] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 2.

[157] *See id.* at Appendix D, Section 7.1.

[158] *See id.* at Appendix D, Section 7.2.

[159] *See id.* at Appendix D, Section 10.1.

[160] *See id.* at Appendix D, Section 7.2. The CAT NMS Plan also notes that both the CAT-Reporter-ID and the SRO-Assigned Market Participant Identifier would be data fields for the online targeted query tool described in the CAT NMS Plan as providing authorized users with the ability to retrieve processed and/or validated (unlinked) data via an online query screen. *See id.* at Appendix D, Section 8.1.1.

[161] *See* Exemption Order, *supra* note 18.

[162] *See supra* note 142.

[163] *See* 17 CFR 242.613(c)(7)(i)(A).

In Appendix C, the Participants describe the "Customer Information Approach,"[166] an alternative approach to the requirement that a broker-dealer report a Customer-ID for every Customer upon original receipt or origination of an order.[167] Under the Customer Information Approach, the CAT NMS Plan would require each broker-dealer to assign a unique Firm Designated ID to each Customer.[168] As the Firm Designated ID, broker-dealers would be permitted to use an account number or any other identifier defined by the firm, provided each identifier is unique across the firm for each business date (*i.e.*, a single firm may not have multiple separate customers with the same identifier on any given date).[169] According to the CAT NMS Plan, broker-dealers would submit an initial set of Customer information to the Central Repository, including, as applicable, the Firm Designated ID, the Customer's name, address, date of birth, individual tax payer identifier number ("ITIN")/social security number ("SSN"), individual's role in the account (*e.g.*, primary holder, joint holder, guardian, trustee, person with power of attorney) and LEI,[170] and/or Large Trader ID ("LTID"), if applicable, which would be updated as set forth in the CAT NMS Plan.[171]

Under the Customer Information Approach, broker-dealers would be required to report only the Firm Designated ID for each new order submitted to the Central Repository, rather than the "Customer-ID" as defined by Rule 613(c)(j)(5) and as required by Rule 613(c)(7)(i)(A), and the Plan Processor would associate specific Customers and their Customer-IDs with individual order events based on the reported Firm Designated IDs.[172] Within the Central Repository, each Customer would be uniquely identified by identifiers or a combination of identifiers such as an ITIN/SSN, date of birth, and, as applicable, LEI and LTID.[173] The Plan Processor would be required to use these unique identifiers to map orders to specific Customers across all broker-dealers.[174] To ensure information identifying a Customer is updated, broker-dealers would be required to submit to the Central Repository daily updates for reactivated accounts, newly established or revised Firm Designated IDs, or associated reportable Customer information.[175]

Appendix C provides additional requirements that the Plan Processor must meet under the Customer Information Approach.[176] The Plan Processor must maintain information of sufficient detail to uniquely and consistently identify each Customer across all CAT Reporters, and associated accounts from each CAT Reporter, and must document and publish, with the approval of the Operating Committee, the minimum list of attributes to be captured to maintain this association.[177] In addition, the Plan Processor must maintain valid Customer and Customer Account Information[178] for each trading day and provide a method for Participants and the Commission to easily obtain historical changes to that information (*e.g.*, name changes, address changes).[179] The Plan Processor also must design and implement a robust data validation process for submitted Firm Designated IDs, Customer Account Information and Customer Identifying Information, and be able to link accounts that move from one CAT Reporter to another due to mergers and acquisitions, divestitures, and other events.[180] Under the Customer Information Approach, broker-dealers will initially submit full account lists for all active accounts to the Plan Processor and subsequently submit updates and changes on a daily basis.[181] Finally, the Plan Processor must have a process to periodically receive full account lists to ensure the completeness and accuracy of the account database.[182]

b. Account Effective Date vs. Account Open Date

Rule 613(c)(7)(viii)(B) requires broker-dealers to report to the Central Repository "Customer Account Information" upon the original receipt or origination of an order.[183] The CAT

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[164] *See* 17 CFR 242.613(j)(5).

[165] *See* 17 CFR 242.613(c)(8).

[166] The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit the Customer Information Approach, which would require each broker-dealer to assign a unique Firm Designated ID to each trading account and to submit an initial set of information identifying the Customer to the Central Repository, in lieu of requiring each broker-dealer to report a Customer-ID for each Customer upon the original receipt or origination of an order. *See* Exemptive Request Letter, *supra* note 16, at 12. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

[167] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a)(iii).

[168] *Id.* at Appendix C, Section A.1(a)(iii). The CAT NMS Plan defines a "Firm Designated ID" as "a unique identifier for each trading account designated by Industry Members for purposes of providing data to the Central Repository, where each such identifier is unique among all identifiers from any given Industry Member for each business date." *See id.* at Section 1.1.

[169] *Id.* at Appendix C, Section A.1(a)(iii).

[170] The CAT NMS Plan provides that where a validated LEI is available for a Customer or entity, this may obviate a need to report other identifier information (*e.g.*, Customer name, address, EIN). *Id.* at Appendix C, Section A.1(a)(iii) n.31.

[171] The CAT NMS Plan states that the Participants anticipate that Customer information that is initially reported to the CAT could be limited to Customer accounts that have, or are expected to have, CAT Reportable Event activity. For example, the CAT NMS Plan notes accounts that are considered open, but have not traded Eligible Securities in a given time frame, may not need to be pre-established in the CAT, but rather could be reported as part of daily updates after they have CAT Reportable Event activity. *Id.* at Appendix C, Section A.1(a)(iii) n.32.

[172] *See id.* at Appendix C, Section A.1(a)(iii). The CAT NMS Plan also requires broker-dealers to report "Customer Account Information" upon the original receipt of origination of an order. *See* CAT NMS Plan, *supra* note 3, at Section 1.1, Section 6.4(d)(ii)(C).

[173] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a)(iii).

[174] *Id.*

[175] The CAT NMS Plan notes that because reporting to the CAT is on an end-of-day basis, intra-day changes to information could be captured as part of the daily updates to the information. To ensure the completeness and accuracy of Customer information and associations, in addition to daily updates, broker-dealers would be required to submit periodic full refreshes of Customer information to the CAT. The scope of the "full" Customer information refresh would need to be further defined, with the assistance of the Plan Processor, to determine the extent to which inactive or otherwise terminated accounts would need to be reported. *Id.* at Appendix C, Section A.1(a)(iii) n.33.

[176] *See id.* at Appendix C, Section A.1(a)(iii).

[177] *Id.* Section 9.1 of Appendix D also addresses, among other things, the minimum attributes that CAT must capture for Customers and the validation process for such attributes. *Id.* at Appendix D, Section 9.1.

[178] *Id.* at Appendix D, Section 9.1. In relevant part, "Customer Account Information" is defined in the Plan to include, but not be limited to, account number, account type, customer type, date account opened, and large trader identifier (if applicable). *See id.* at Section 1.1.

[179] *See id.* at Appendix C, Section A.1(a)(iii).

[180] *Id.* at Appendix C, Section A.1(a)(iii). The CAT NMS Plan defines "Customer Identifying Information" to mean "information of sufficient detail to identify a Customer, including, but not limited to, (a) with respect to individuals: Name, address, date of birth, individual tax payer identification number ("ITIN")/social security number ("SSN"), individual's role in the account (*e.g.*, primary holder, joint holder, guardian, trustee, person with the power of attorney); and (b) with respect to legal entities: name, address, Employer Identification Number ("EIN")/LEI) or other comparable common entity identifier, if applicable; provided, however, where the LEI or other common entity identifier is provided, information covered by such common entity identifier (*e.g.*, name, address) would not need to be separately submitted to the Central Repository." *See id.* at Section 1.1.

[181] *Id.* at Appendix C, Section A.1(a)(iii).

[182] *Id.*

[183] 17 CFR 242.613(c)(7)(viii)(B). "Customer Account Information" is defined in Rule 613(j)(4)

Continued

NMS Plan defines “Customer Account Information” to include, in part, the Customer’s account number, account type, customer type, date account opened and LTID (if applicable).[184] The Plan, however, provides that in two limited circumstances, a broker-dealer could report the “Account Effective Date” in lieu of the date an account was opened.[185] The first circumstance is where a relationship identifier—rather than an actual parent account—has been established for an institutional Customer relationship.[186] In this case, no account open date is available for the institutional Customer parent relationship because there is no parent account, and for the same reason, there is no account number or account type available.[187] Thus, the Plan provides that in this circumstance, a broker-dealer could report the “Account Effective Date” of the relationship in lieu of an account open date.[188] Further, the Plan provides that where such an institutional Customer relationship was established *before* the broker-dealer’s obligation to report audit trail data is required, the “Account Effective Date” would be either (i) the date the broker-dealer established the relationship identifier, or (ii) the date when trading began (*i.e.,* the date the first order is received) using the relevant relationship identifier, and if both dates are available and differ, the earlier date.[189] Where such relationships are established *after* the broker-dealer’s obligation to report audit trail data is required, the “Account Effective Date” would be the date the broker-dealer established the relationship identifier and would be no later than the date the first order was received.[190] Regardless of when the relationship was established for such institutional Customers, the Plan provides that broker-dealers may report the relationship identifier in place of Rule 613(c)(7)(viii)(B)’s requirement to report the “account number,” and report “relationship” in place of “account type.” [191]

The second circumstance where a broker-dealer may report the “Account Effective Date” rather than the date an account was opened as required in Rule 613(c)(7)(viii)(B) is when particular legacy system data issues prevent a broker-dealer from providing an account open date for any type of account (*i.e.,* institutional, proprietary or retail) that was established before CAT’s implementation.[192] According to the Plan, these legacy system data issues may arise because:

(1) A broker-dealer has switched back office providers or clearing firms and the new back office/clearing firm system identifies the account open date as the date the account was opened on the new system;

(2) A broker-dealer is acquired and the account open date becomes the date that an account was opened on the post-merger back office/clearing firm system;

(3) Certain broker-dealers maintain multiple dates associated with accounts in their systems and do not designate in a consistent manner which date constitutes the account open date, as the parameters of each date are determined by the individual broker-dealer; or

(4) No account open date exists for a proprietary account of a broker-dealer.[193]

Thus, when legacy systems data issues arise due to one of the four reasons above and no account open date is available, the Plan provides that broker-dealers would be permitted to report an “Account Effective Date” in lieu of an account open date.[194] When the legacy systems data issues and lack of account open date are attributable to above reasons (1) or (2), the “Account Effective Date” would be the date the account was established, either directly or via a system transfer, at the relevant broker-dealer.[195] When the legacy systems data issues and lack of account open date are attributable to above reason (3), the “Account Effective Date” would be the earliest available date.[196] When the legacy systems data issues and lack of account open date are attributable to above reason (4), the “Account Effective Date” would be (i) the date established for the proprietary account in the broker-dealer or its system(s), or (ii) the date when proprietary trading began in the account, *i.e.,* the date on which the first orders were submitted from the account.[197]

c. Modification/Cancellation

Rule 613(c)(7)(iv)(F) requires that “[t]he CAT-Reporter-ID of the broker-dealer or Customer-ID of the *person* giving the modification or cancellation instruction” be reported to the Central Repository.[198] Because the Customer Information Approach no longer requires that a Customer-ID be reported upon original receipt or origination of an order, and because reporting the Customer-ID of the specific person that gave the modification or cancellation instruction would result in an inconsistent level of information regarding the identity of the person giving the modification or cancellation instruction versus the identity of the Customer that originally received or originated an order, Section 6.3(d)(iv)(F) of the CAT NMS Plan modifies the requirement in Rule 613 and instead requires CAT Reporters to report whether the modification or cancellation instruction was “given by the Customer or was initiated by the Industry Member or Participant.” [199]

Request for Comment

135. The Commission granted an exemption from Rule 613 in order to allow the Customer Information Approach to be included in the CAT NMS Plan and subject to notice and comment. The Customer Information Approach would require each broker-dealer to assign a unique Firm Designated ID to each trading account and to submit an initial set of information identifying the Customer to the Central Repository, in lieu of Rule 613’s requirement that a CAT Reporter must report a Customer-ID for each Customer upon the original receipt or

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to “include, but not be limited to, account number, account type, customer type, date account opened, and large trader identifier (if applicable).” 17 CFR 242.613(j)(4).

[184] *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[185] *Id.* The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit broker-dealers to report to the Central Repository the “effective date” of an account in lieu of requiring each broker-dealer to report the date the account was opened in certain limited circumstances. *See* Exemptive Request Letter, *supra* note 16, at 13. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

[186] *See* Exemption Order, *supra* note 18; *see also* September 2015 Supplement, *supra* note 16, at 4–5.

[187] *See* September 2015 Supplement, *supra* note 16, at 6.

[188] *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[189] *See id.*

[190] *See id.*

[191] *See id.*

[192] *See id.; see also* September 2015 Supplement, *supra* note 16, at 7–9.

[193] *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[194] *Id.*

[195] *Id.*

[196] *Id.*

[197] *Id.*

[198] 17 CFR 242.613(c)(7)(iv)(F) (emphasis added).

[199] *See* CAT NMS Plan, *supra* note 3, at Section 6.3(d)(iv)(F). The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit CAT Reporters to report whether a modification or cancellation instruction was given by the Customer associated with the order, or was initiated by the broker-dealer or exchange associated with the order, in lieu of requiring CAT Reporters to report the Customer-ID of the person giving the modification or cancellation instruction. *See* Exemptive Request Letter, *supra* note 16, at 12–13. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

origination of an order. Do Commenters believe that allowing broker-dealers to report a Firm Designated ID to the Central Repository is more efficient and cost-effective than the Rule 613 approach of requiring broker-dealers to report a unique Customer-ID upon original receipt or origination of an order? Would allowing CAT Reporters to report a Firm Designated ID to the Central Repository merely transfer the costs from individual broker-dealers to the Central Repository? Or do Commenters believe that the Rule 613 approach is preferable? Why or why not?

136. If broker-dealers are permitted to report a Firm Designated ID, do Commenters believe the proposed CAT NMS Plan includes sufficiently detailed requirements to determine whether the Plan Processor could use the Firm Designated ID to identify a Customer?

137. Do Commenters believe the CAT NMS Plan's proposal to permit reporting a Firm Designated ID would affect the accuracy of CAT Data collected and maintained under the CAT compared to the Rule 613 approach that requires a unique Customer-ID? If so, how? Would permitting reporting a Firm Designated ID result in more complete CAT Data? If so, please explain.

138. Do Commenters believe the CAT NMS Plan's proposal to permit reporting a Firm Designated ID would affect the accessibility of CAT Data collected and maintained under the CAT compared to the Rule 613 approach? If so, how? Would permitting reporting a Firm Designated ID result in CAT Data being more accessible? If so, please explain.

139. Do Commenters believe allowing broker-dealers to report a Firm Designated ID to the Central Repository would affect the timeliness of data collected and maintained under the CAT compared to the Rule 613 approach? Would permitting reporting a Firm Designated ID result in more timely CAT Data? If so, please explain.

140. Do Commenters believe there are any increased risks related to allowing a broker-dealer to report a Firm Designated ID rather than a unique Customer-ID to the Central Repository? How difficult would it be for the Central Repository to utilize a Firm Designated ID for each account?

141. Do Commenters believe that the CAT NMS Plan has provided sufficient information to determine whether the Central Repository could use a Firm Designated ID to efficiently, reliably and accurately link orders and Reportable Events to a Customer?

142. Do Commenters believe that the CAT NMS Plan includes sufficient safeguards or policies to assure that the same Firm Designated ID would not be used for multiple Customers?

143. The CAT NMS Plan does not require that a broker-dealer provide an LEI to the Plan Processor as part of the identifying information used to assign a Customer-ID at the Central Repository. The CAT NMS Plan provides that a broker-dealer must report its LEI, if available, but allows a broker-dealer to report another comparable common entity identifier, if an LEI is not available. Do Commenters believe that the CAT NMS Plan should mandate that broker-dealers provide an LEI as part of the information used by the Plan Processor to uniquely identify Customers? Why or why not?

144. Do Commenters believe that reporting the Firm Designated ID, rather than a unique Customer-ID, would affect the security and confidentiality of CAT Data? If so, how? Would permitting reporting a Firm Designated ID result in a different level of security and confidentiality of CAT Data? If so, please explain.

145. The CAT NMS Plan provides that an initial set of Customer Account Information and Customer Identifying Information would be reported to the Central Repository by broker-dealers upon the commencement of reporting audit trail data to the Central Repository by that broker-dealer, and that such Customer Identifying Information would be updated as set forth in the CAT NMS Plan. Do Commenters believe that the approach for reporting an initial set of Customer Account Information and Customer Identifying Information and updates to such information thereafter as set forth in the CAT NMS Plan would affect the quality, accuracy, completeness, accessibility or timeliness of the data? If so, what additional requirements or details should be provided in the CAT NMS Plan?

146. Do Commenters believe that allowing broker-dealers to report an initial set of Customer Account Information and Customer Identifying Information and updates to such information thereafter is more efficient and cost-effective than the Rule 613 approach for identifying Customers under Rule 613? Or do Commenters believe that the Rule 613 approach is preferable? Why or why not?

147. Do Commenters believe there are any increased risks as a result of allowing a broker-dealer to report an initial set of Customer Account Information and Customer Identifying Information and updates to such information thereafter to be reported to the Central Repository? How difficult would it be for the Central Repository to ingest the Customer Account Information and Customer Identifying information, and any updates thereafter?

148. Do Commenters believe that the CAT NMS Plan provides sufficient information to determine whether the Central Repository could use the initial set of Customer Account Information and Customer Identifying Information and updates to such information thereafter to efficiently, reliably and accurately link orders and Reportable Events to a Customer?

149. Do Commenters believe that reporting an initial set of Customer Account Information and Customer Identifying Information and updates to such information thereafter would affect the security and confidentiality of CAT Data? If so, how? Would reporting an initial set of Customer Account Information and Customer Identifying Information and updates to such information result in a different level of security and confidentiality? If so, please explain.

150. As part of the Customer Identifying Information reported to the Central Repository, the CAT NMS Plan requires a broker-dealer to report PII such as the Customer's name, address, date of birth, and ITIN/SSN. Do Commenters believe there is data that could be reported by broker-dealers and used by the Central Repository to identify Customers that is not PII? What types of data would this be? If data other than PII is used to identify a Customer, do Commenters believe that such data would be sufficiently unique to ensure that Customers can be accurately identified by the Central Repository?

151. If data other than PII is used by the Central Repository to identify a Customer, would the use of such data affect the quality or completeness of the CAT audit trail, as compared to the use of PII to identify a Customer?

152. Do Commenters believe that if broker-dealers reported data other than PII to identify Customers, the accessibility and timeliness of the data collected and maintained under the CAT would be affected? If the data would be affected, in what way(s)?

153. Would relying on data other than PII to identify a Customer be a more efficient and cost-effective way to identify Customers, as compared to relying on PII to identify a Customer?

154. Do Commenters believe that there would be increased risks to the reliability of the CAT audit trail data if broker-dealers were required to identify a Customer with data that does not include PII?

155. If broker-dealers report data other than PII to identify Customers, do Commenters believe that the Central Repository could efficiently, reliably

and accurately link orders and Reportable Events to a Customer?

156. Do Commenters believe that the proposed CAT NMS Plan provides sufficient information to determine when broker-dealers would report the "Account Effective Date", rather than the date the Customer's account was opened as required by Rule 613? Is there any ambiguity in the circumstances under which a broker-dealer would report an "Account Effective Date" rather than the date a Customer's account was opened?

157. Do Commenters believe reporting of the "Account Effective Date" rather than the account open date for a Customer's account under the Rule 613 approach would affect the quality, accuracy, completeness, accessibility or timeliness of the CAT data? If it does, what additional requirements or details should be provided in the CAT NMS Plan prior to the Commission's approval of such Plan? Or do Commenters believe that the Rule 613 approach is preferable? Why or why not?

158. Do Commenters believe that reporting the "Account Effective Date" would provide sufficient information to the Central Repository to facilitate the ability of the Plan Processor to link a Customer's account with the Customer?

159. Do Commenters believe that allowing the reporting of the "Account Effective Date" would be more efficient and cost-effective than requiring the Rule 613 approach of reporting of a Customer's account open date? Or do Commenters believe that the Rule 613 approach is preferable? Why or why not? Would allowing CAT Reporters to report the "Account Effective Date" rather than the date a Customer's account was opened merely transfer the costs from individual CAT Reporters to the Central Repository?

160. Do Commenters agree that the proposed approach for reporting the "Account Effective Date," which differs depending on whether the account was established before or after the commencement of reporting audit trail data to the Central Repository as set forth in the CAT NMS Plan, is a reasonable approach? Why or why not?

161. The Commission granted an exemption from Rule 613 to permit the alternative of allowing CAT Reporters to report whether the modification or cancellation of an order was given by a Customer, or initiated by a broker-dealer or exchange, in lieu of requiring the reporting of the Customer-ID of the person giving the modification or cancellation instruction, to be included in the CAT NMS Plan and subject to notice and comment. To what extent does the approach permitted by the exemption affect the completeness of the CAT? Would the information lost under the approach permitted by the exemption affect investigations or surveillances? If so, how?

8. Order Allocation Information

Section 6.4(d)(ii)(A)(1) of the CAT NMS Plan provides that each Participant through its Compliance Rule must require that Industry Members record and report to the Central Repository an Allocation Report that includes the Firm Designated ID when an execution is allocated in whole or part.[200] The CAT NMS Plan defines an Allocation Report as "a report made to the Central Repository by an Industry Member that identifies the Firm Designated ID for any account(s), including subaccount(s), to which executed shares are allocated and provides the security that has been allocated, the identifier of the firm reporting the allocation, the price per share of shares allocated, the side of shares allocated, the number of shares allocated to each account, and the time of the allocation." [201] The CAT NMS Plan explains, for the avoidance of doubt, that an Allocation Report shall not be required to be linked to particular orders or executions.[202]

Request for Comment

162. The Commission granted an exemption from Rule 613 in order to allow the alternative of permitting the CAT NMS Plan to provide that Industry Members record and report to the Central Repository an Allocation Report that includes the Firm Designated ID when an execution is allocated in whole or part. This alternative is in lieu of the requirement in Rule 613 that Industry Members must report the account number for any subaccount to which an execution is allocated.[203] Do Commenters believe that providing the information required in an Allocation Report as a means to identify order events and information related to the subaccount allocation information (the "Allocation Report Approach") would be more efficient and cost-effective than the Rule 613 approach requiring the reporting of the account number for any subaccount to which an execution is allocated? Or do Commenters believe that the Rule 613 approach is preferable? Why or why not?

163. Do Commenters believe that the Allocation Report Approach would affect the completeness of CAT Data? If so, how? Would the Allocation Report Approach result in more complete CAT Data? If so, please explain.

164. Do Commenters believe that the Allocation Report Approach would affect the accessibility of allocation information? If so, how? Would the Allocation Report Approach result in more accessible CAT Data? If so, please explain.

165. Do Commenters believe that the Allocation Report Approach would affect the timeliness of allocation information? If so, how? Would the Allocation Report Approach result in more timely CAT Data? If so, please explain.

166. Do Commenters believe the Allocation Report Approach would affect the security and confidentiality of CAT Data? If so, how? Would the Allocation Report Approach result in a different level of security or confidentiality? If so, please explain.

167. Do Commenters believe that the Allocation Report Approach described by the SROs is feasible? What challenges or risks would CAT Reporters face in providing such information? What challenges or risks would the Plan Processor face when ingesting such information and linking it to the appropriate Customers' accounts?

9. Options Market Maker Quotes

Section 6.4(d)(iii) of the CAT NMS Plan states that, with respect to the reporting obligations of an Options Market Maker under Sections 6.3(d)(ii) and (iv) regarding its quotes [204] in Listed Options, such quotes shall be reported to the Central Repository by the relevant Options Exchange in lieu of reporting by the Options Market Maker.[205] Section

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[200] *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(ii)(A)(1); *see also* April 2015 Supplement, *supra* note 16. The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit Industry Members to record and report to the Central Repository an Allocation Report that includes the Firm Designated ID when an execution is allocated in whole or part in lieu of requiring the reporting of the account number for any subaccount to which an execution is allocated, as is required by Rule 613. *See* Exemptive Request Letter, *supra* note 16, at 26–27. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

[201] *See* CAT NMS Plan, *supra* note 3, at Section 1.1; *see also* April 2015 Supplement, *supra* note 16.

[202] *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[203] *See* Exemption Order, *supra* note 18.

[204] Rule 613(c)(7) provides that the CAT NMS Plan must require reporting of the details for each order and each Reportable Event, including the routing and modification or cancellation of an order. 17 CFR 242.613(c)(7). Rule 613(j)(8) defines "order" to include "any bid or offer." 17 CFR 242.613(j)(8).

[205] *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(iii). The SROs requested exemptive relief from Rule 613 so that the CAT NMS Plan may permit Options Market Maker quotes to be reported to the Central Repository by the relevant Options

6.4(d)(iii) further states that each Participant that is an Options Exchange shall, through its Compliance Rule, require its Industry Members that are Options Market Makers to report to the Options Exchange the time at which a quote in a Listed Option is sent to the Options Exchange (and, if applicable, the time of any subsequent quote modification and/or cancellation where such modification or cancellation is originated by the Options Market Maker).[206] Such time information also shall be reported to the Central Repository by the Options Exchange in lieu of reporting by the Options Market Maker.[207]

Request for Comment

168. The Commission granted an exemption from Rule 613 in order to allow the alternative of permitting Options Exchanges to report Options Market Maker quotes to the Central Repository in lieu of requiring such reporting by both the Options Exchange and the Options Market Maker as is required by Rule 613, to be included in the CAT NMS Plan and subject to notice and comment.[208] Do Commenters believe that permitting exchanges to report quote information sent to them by Options Market Makers, including the Quote Sent Time, to the Central Repository would affect the completeness or quality of CAT Data? If so, what information would be missing?

169. Under Rule 613, Options Market Makers would report their quotes to the Central Repository and time stamps would be attached to such quotes. Under the exemption, Options Market Makers would include the Quote Sent Time when sending quote information to the Options Exchanges. What, if any, are the risks of permitting the Options Exchanges to report information Options Market Makers otherwise would be required to report?

170. Do Commenters believe that the cost savings from permitting Options Exchanges to report information Options Market Makers would otherwise have to report makes this a preferable approach than Rule 613?

10. Error Rates

The CAT NMS Plan defines Error Rate as "the percentage of [R]eportable [E]vents collected by the [C]entral [R]epository in which the data reported does not fully and accurately reflect the order event that occurred in the market." [209] Under the CAT NMS Plan, the Operating Committee sets the maximum Error Rate that the Central Repository would tolerate from a CAT Reporter reporting data to the Central Repository.[210] The Operating Committee reviews and resets the maximum Error Rate, at least annually.[211] If a CAT Reporter reports CAT Data to the Central Repository with errors such that their error percentage exceeds the maximum Error Rate, then such CAT Reporter would not be in compliance with the CAT NMS Plan or Rule 613.[212] As such, "the Participants as Participants or the SEC may take appropriate action for failing to comply with the reporting obligations under the CAT NMS Plan and SEC Rule 613." [213] The CAT NMS Plan, however, does not detail what specific compliance enforcement provisions would apply if a CAT Reporter exceeds the maximum Error Rate.

The CAT NMS Plan sets the initial maximum Error Rate at 5% for any data reported pursuant to subparagraphs (3) and (4) of Rule 613(c).[214] The SROs highlight that "the Central Repository will require new reporting elements and methods for CAT Reporters and there will be a learning curve when CAT Reporters begin to submit data to the Central Repository" in support of a 5% initial rate.[215] Further, the SROs state that "many CAT Reporters may have never been obligated to report data to an audit trail." [216] The SROs believe an initial maximum Error Rate of 5% "strikes the balance of making allowances for adapting to a new reporting regime, while ensuring that the data provided to regulators will be capable of being used to conduct surveillance and market reconstruction." [217] In the CAT NMS Plan, the Participants compared the contemplated Error Rates of CAT Reporters to the error rates of OATS reporters in the time periods immediately following three significant OATS releases in the last ten years.[218] The Participants state that for the three comparative OATS releases: [219] An average of 2.42% of order events did not pass systemic validations; an average of 0.36% of order events were not submitted in a timely manner; an average of 0.86% of orders were unsuccessfully matched to a trade reporting facility trade report; an average of 3.12% of OATS Route Reports were unsuccessfully matched to an exchange order; and an average of 2.44% of OATS Route Reports were unsuccessfully matched to a report by another reporting entity.[220]

The Participants, moreover, anticipate reviewing and resetting the maximum Error Rate once Industry Members (excluding Small Industry Members) begin to report to the Central Repository and again once Small Industry Members report to the Central Repository.[221]

The Participants thus propose a phased approach to lowering the maximum Error Rates among CAT Reporters based on the period of time reporting to the Central Repository and whether the CAT Reporters are Participants, large broker-dealers or small broker-dealers.[222] The Plan sets forth a goal of the following maximum Error Rates [223] where "Year(s)" refers to year(s) after the CAT NMS Plan's date of effectiveness:

Exchange in lieu of requiring that such reporting be done by both the Options Exchange and the Options Market Maker, as is required by Rule 613. *See* Exemptive Request Letter, *supra* note 16, at 2. In accord with the exemptive relief requested, the SROs committed to require Options Market Makers to report to the Exchange the time at which a quote in a Listed Option is sent to the Options Exchange. *Id.* at 3. The Commission granted exemptive relief on March 1, 2016 in order to allow this alternative to be included in the CAT NMS Plan and subject to notice and comment. *See* Exemption Order, *supra* note 18.

[206] *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(iii).

[207] *Id.*

[208] *See* Exemption Order, *supra* note 18.

[209] *See* CAT NMS Plan, *supra* note 3, at Section 1.1; *see also* Rule 613(j)(6).

[210] *See id.* at Section 6.5(d)(i).

[211] *See id.* at Appendix C, Section A.3(b).

[212] *See id.* at Appendix C, Section A.3(b) and Rule 613(g) and (h).

[213] *See id.* at Appendix C, Section A.3(b).

[214] *See id.* at Section 6.5(d)(i).

[215] *See id.* at Appendix C, Section A.3(b).

[216] *See id.*

[217] *See id.*

[218] *See id.* The SROs note that the three comparative releases are known as "(1) OATS Phase III, which required manual orders to be reported to OATS; (2) OATS for OTC Securities which required OTC equity securities to be reported to OATS; and (3) OATS for NMS which required all NMS stocks to be reported to OATS." *Id.*

[219] *See id.* The SROs note that the calculated "combined average error rates for the time periods immediately following [the OATS] release across five significant categories for these three releases" was used in setting in the initial maximum Error Rate. *Id.*

[220] *See id.*

[221] *See id.*

[222] *See id.*

[223] *See id.*

TABLE 1—MAXIMUM ERROR RATES SCHEDULE

	One year %	Two years %	Three years %	Four years %
Participants	5	1	1	1
Large Industry Members	N/A	5	1	1
Small Industry Members	N/A	N/A	5	1

The CAT NMS Plan requires that the Plan Processor to: (i) Measure and report errors every business day;[224] (ii) provide CAT Reporters daily statistics and error reports as they become available, including a description of such errors;[225] (iii) provide monthly reports to CAT Reporters that detail a CAT Reporter's performance and comparison statistics;[226] (iv) define educational and support programs for CAT Reporters to minimize Error Rates;[227] and (v) identify, daily, all CAT Reporters exceeding the maximum allowable Error Rate.[228] To timely correct data-submitted errors to the Central Repository, the Participants require that the Central Repository receive and process error corrections at all times.[229] Further, the CAT NMS Plan requires that CAT Reporters be able to submit error corrections to the Central Repository through a web-interface or via bulk uploads or file submissions, and that the Plan Processor, subject to the Operating Committee's approval, support the bulk replacement of records and the reprocessing of such records.[230] The Participants, furthermore, require that the Plan Processor identify CAT Reporter data submission errors based on the Plan Processor's validation processes.[231]

Request for Comment[232]

171. Do Commenters believe the CAT NMS Plan's initial maximum Error Rate of 5% for CAT Data reported to the Central Repository is appropriate in light of OATS' current error rate of less than 1%?[233] Why or why not?

172. Please provide examples of error rates that are generally accepted with respect to other regulatory data reporting systems. At what error rate should data be considered materially unreliable? Please explain.

173. Do Commenters believe the CAT NMS Plan's initial maximum Error Rate of 5% would negatively affect the quality of CAT Data? Why or why not? In explaining why or why not, please address each quality (accuracy, completeness, timeliness and accessibility) separately.

174. Do Commenters believe that it was reasonable for the Participants to compare the contemplated Error Rates of CAT Reporters to the error rates of OATS reporters in the time periods immediately following three significant OATS releases in the last ten years? Why or why not?

175. If not 5%, what initial maximum Error Rate do Commenters believe Participants and Industry Members should be subject to and why?

176. What impact, if any, do Commenters believe a 5% initial maximum Error Rate would have on Industry Members' costs of compliance? Please describe the costs of correcting audit trail data. Given the costs of correcting audit trail data, do Commenters believe that establishing a lower maximum Error Rate could be less costly to Industry Members? Why or why not? How much less costly?

177. What impact, if any, do Commenters believe a 5% initial maximum Error Rate would have on the timing of the retirement of any redundant audit trail systems and any related costs? Please explain. Should the actual Error Rate for CAT Data affect the timing of the retirement of any redundant audit trail systems? If so, why? If not, why not?

178. Do Commenters believe the CAT NMS Plan's target maximum Error Rate of 1% for CAT Data reported to the Central Repository pursuant to the CAT NMS Plan's phased approach is the appropriate target maximum Error Rate in light of current industry standards? If not, why not? If not 1%, what target maximum Error Rate do Commenters believe Participants and Industry Members should be subject to and why?

179. Do Commenters believe there are any increased risks as a result of allowing CAT Data subject to an initial maximum Error Rate of 5% to be reported to the CAT? How difficult would it be for the Central Repository to process and analyze CAT Data based on data reported subject to an initial maximum Error Rate of 5%? Specifically, what are the increased risks, if any, of CAT Data reported subject to an Error Rate of 5% in respect of combining or linking data within the Central Repository or across other sources of trade and order data currently available to regulators?

180. Do Commenters believe there are any increased risks as a result of allowing CAT Data subject to a target maximum Error Rate of 1% to be reported to the CAT? How difficult would it be for the Central Repository to process and analyze CAT Data based on data reported subject to a target maximum Error Rate of 1%? Specifically, what are the increased risks, if any, of CAT Data reported subject to an Error Rate of 1% in respect of combining or linking data within the Central Repository or across other sources of trade and order data currently available to regulators?

181. The CAT NMS Plan provides that the Participants would review and reset, at least on an annual basis, the maximum Error Rate. Do Commenters believe that this establishes an appropriately rigorous schedule for the Participants to evaluate whether the maximum Error Rate could potentially be set to a lower rate? Are there any other factors that should affect when and how the maximum Error Rate is set?

182. The CAT NMS Plan provides as a goal a four-year phased approach schedule to lower the maximum Error

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[224] *See id.* The CAT NMS Plan sets forth that the Plan Processor shall provide the Operating Committee with regular Error Rate reports. *Id.* at Section 6.1(o)(v). The Error Rate reports shall include each of the following—if the Operating Committee deems them necessary or advisable—"Error Rates by day and by delta over time, and Compliance Thresholds by CAT Reporter, by Reportable Event, by age before resolution, by symbol, by symbol type (*e.g.,* ETF and Index) and by event time (by hour and cumulative on the hour)[.]" *Id.*

[225] *See id.* at Appendix C, Section A.3(b).

[226] *See id.*

[227] *See id.* at Appendix D, Section 10.1. The CAT NMS Plan sets forth support programs that shall include educational programs, including FAQs, a dedicated help desk, industry-wide trainings, certifications, industry-wide testing, maintaining Technical Specifications with defined intervals for new releases/updates, emailing CAT Reporter data outliers, conducting annual assessments, using test environments prior to releasing new code to production, and imposing CAT Reporter attendance requirements for testing sessions and educational and industry-wide trainings. *Id.*

[228] *See id.* at Appendix D, Section 10.4.

[229] *See id.* at Appendix C, Section A.3(b).

[230] *See id.*

[231] *See id.* At a minimum, the processes would include validating the data's file format, CAT Data format, type, consistency, range, logic, validity, completeness, timeliness and linkage. *See id.* at Appendix D, Section 7.2.

[232] *See* Section IV.E.4, *infra,* for further Error Rate related requests for comment.

[233] *See* Section IV.E.1.b(1), *infra.*

Rate segmented by Participants, large broker-dealers and small broker-dealers. Do Commenters believe a phased schedule is appropriate and reasonable? Do Commenters believe establishing segments is appropriate and reasonable, and if so are these the appropriate Error Rate groupings? What alternative groupings, if any, do Commenters believe are the appropriate Error Rate groupings?

183. Do Commenters believe that the CAT NMS Plan is clear whether the four-year phased approach is a goal? Should it be more than a goal? Please explain.

184. Do Commenters believe the phased approach for CAT implementation, whereby SROs would begin reporting CAT Data one year prior to other CAT Reporters and two years prior to small CAT Reporters, would affect the quality of the CAT Data and the number of available CAT Data items in the audit trail?

185. Do Commenters believe the CAT NMS Plan provides adequate enforcement provisions to ensure CAT Reporters submit data to the Central Repository no higher than the maximum Error Rate? If not, what additional enforcement provisions should the CAT NMS Plan provide?

186. Do Commenters believe that there should be a lower initial maximum Error Rate and/or a more accelerated or slower reduction of the target maximum Error Rate? Would an accelerated reduction of the target maximum Error Rate facilitate the earlier retirement of any redundant audit trail system? What should the initial maximum Error Rate and/or what should be the schedule for reducing the target maximum Error Rate?

187. What framework and criteria should regulators adopt when determining whether to retire potentially redundant regulatory data reporting systems? Please explain when and how such retirement should take place.

188. Do Commenters believe the CAT NMS Plan sets forth sufficient consequences for a CAT Reporter exceeding the maximum Error Rates? If not, what should be those consequences?

189. Do Commenters believe that some errors are of greater concern than others? If so, what types of errors are more or less problematic? Should the type of error be considered when calculating Error Rates? If so, how should the Plan Processor take into account different types of errors when calculating Error Rates? How should the Participants take into account different types of errors when setting Error Rates?

11. Regulatory Access

Under Section 6.5(c) of the CAT NMS Plan, the Plan Processor must provide regulators access to the Central Repository for regulatory and oversight purposes and create a method of accessing CAT Data that includes the ability to run complex searches and generate reports.[234] Section 6.10(c) requires regulator access by two different methods: (1) An online targeted query tool with predefined selection criteria to choose from; and (2) user-defined direct queries and bulk extractions of data via a query tool or language allowing querying of all available attributes and data sources.[235] Additional requirements concerning regulator access appear in Section 8 of Appendix D.[236]

The CAT NMS Plan requires that CAT must support a minimum of 3,000 regulatory users and at least 600 such users accessing CAT concurrently without an unacceptable decline in performance.[237] Moreover, CAT must support an arbitrary number of user roles and, at a minimum, include defined roles for both basic and advanced regulatory users.[238]

a. Online Targeted Query Tool

Sections 8.1.1, 8.1.2, and 8.1.3 of Appendix D contain further specifications for the online targeted query tool.[239] The tool must allow for retrieval of processed and/or validated (unlinked) data via an online query screen that includes a choice of a variety of pre-defined selection criteria.[240] Targeted queries must include date(s) and/or time range(s), as well as one or more of a variety of fields listed in Section 8.1.1 (*e.g.*, product type, CAT-Reporter-ID, and Customer-ID).[241] Targeted queries would be logged such that the Plan Processor could provide monthly reports to the SROs concerning metrics on performance and data usage of the search tool.[242] The CAT NMS Plan further requires that acceptable response times for the targeted search be in increments of less than one minute; for complex queries scanning large volumes of data or large result sets (over one million records) response times must be available within 24 hours of the request; and queries for data within one business date of a 12-month period must return results within three hours regardless of the complexity of criteria.[243] Under the CAT NMS Plan, regulators may access all CAT Data except for PII data (access to which would be limited to an authorized subset of Participant and Commission employees) and the Plan Processor must work with regulators to implement a process for providing them with access and routinely verifying a list of active users.[244]

b. User-Defined Direct Queries and Bulk Extraction of Data

Section 8.2 of Appendix D outlines the requirements for user-defined direct queries and bulk extraction of data, which regulators would use to obtain large data sets for internal surveillance or market analysis.[245] Under the CAT NMS Plan, regulators must be able to create, save, and schedule dynamic queries that would run directly against processed and/or unlinked CAT Data.[246] Additionally, CAT must provide an open application program interface ("API") that allows use of analytic tools and database drivers to access CAT Data.[247] Queries submitted through the open API must be auditable and the CAT System must contain the same level of control, monitoring, logging, and reporting as the online targeted query tool.[248] The Plan Processor must also provide procedures and training to regulators that would use the direct query feature.[249] Sections 8.2.1 and 8.2.2 of Appendix D contain additional specifications for user-defined direct queries and bulk data extraction, respectively.[250]

c. Regulatory Access Schedule

Section A.2 of Appendix C addresses the time and method by which CAT

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[234] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(c). Appendix C provides objective milestones to assess progress concerning regulator access to the Central Repository. *See id.* at Appendix C, Section C.10(d).

[235] *Id.* at Section 6.10(c). Section 6.10(c) also requires the Plan Processor to reasonably assist regulatory staff with queries, submit queries on behalf of regulatory staff as requested, and maintain a help desk to assist regulatory staff with questions concerning CAT Data. *Id.*

[236] *See id.* at Appendix D, Section 8.

[237] *Id.* at Appendix D, Section 8.1.

[238] *Id.*

[239] *Id.* at Appendix D, Sections 8.1.1–8.1.3.

[240] *Id.* at Appendix D, Section 8.1.1.

[241] *Id.*

[242] *Id.*

[243] *Id.* at Appendix D, Section 8.1.2. Appendix D, Section 8.1.2 contains further performance requirements applicable to data and the architecture of the online query tool. *Id.*

[244] *Id.* at Appendix D, Section 8.1.3.

[245] *Id.* at Appendix D, Section 8.2.

[246] *Id.*

[247] *Id.*

[248] *Id.* Direct queries must not return or display PII data but rather display non-PII unique identifiers (*e.g.*, Customer-ID or Firm Designated ID). The PII corresponding to these identifiers could be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements. *See id.* at Appendix D, Section 4.1.6.

[249] *Id.* at Appendix D, Section 8.2.

[250] *Id.* at Appendix D, Sections 8.2.1 and 8.2.2.

Data would be available to regulators.[251] Section A.2(a) requires that data be available to regulators any point after the data enters the Central Repository and passes basic format validations.[252] After errors are communicated to CAT Reporters on T+1, CAT Reporters would be required to report corrected data back to the Central Repository by 8 a.m. Eastern Time on T+3.[253] Regulators must then have access to corrected and linked Order and Customer data by 8:00 a.m. Eastern Time on T+5.[254] Section A.2(b) generally describes Bidders' approaches regarding regulator access and use of CAT Data and notes that although the SROs set forth the standards the Plan Processor must meet, they do not endorse any particular approach.[255] Section A.2(c) outlines requirements the Plan Processor must meet for report building and analysis regarding data usage by regulators, consistent with, and in addition to, the specifications outlined in Section 8 of Appendix D.[256]

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190. Do Commenters believe the CAT NMS Plan's "Functionality of the CAT System" Section (Section 8 of Appendix D) describes with sufficient detail how a regulator would access, use and analyze CAT Data? If not, describe what, if any, additional requirements and details should be provided and how.

191. Do Commenters believe the CAT NMS Plan's "Functionality of the CAT System" Section sufficiently addresses all regulators' end-user requirements? If not, please explain. Describe what, if any, additional requirements and details should be provided and how.

192. If Commenters believe that the CAT NMS Plan's "Functionality of the CAT System" Section does not cover all regulators' end-user requirements, please describe how regulators would integrate their applications in a timely and reasonable manner.

193. The CAT NMS Plan permits the CAT to be implemented in a way that would (1) require regulators to download entire data sets and analyze such data within the regulator or the regulators' cloud or (2) permit regulators to analyze sets of data within the CAT using applications or programs selected by the Commission. What do Commenters believe are the advantages and disadvantages to each approach?

194. Do Commenters believe the CAT NMS Plan's T+5 schedule for regulatory access to corrected and linked Order and Customer data is the appropriate schedule in light of current industry standards? If not, why not? Do Commenters believe that the SROs' determination of current industry standards is reasonable or appropriate? Do Commenters believe that it is appropriate to base the timing for regulatory access on industry standards? Why or why not?

195. If the T+5 schedule is not appropriate, when do Commenters believe regulatory access to corrected and linked Order and Customer data should be provided and why? Do Commenters believe the SROs' should include in the CAT NMS Plan detailed provisions with milestones in achieving a more accelerated regulatory access schedule to corrected and linked Order and Customer data?

196. Do Commenters believe the Plan's proposed error correction timeframe—*i.e.,* communication of errors on T+1, corrected data resubmitted by CAT Reporters by T+3, and corrected data available to regulators by T+5—is feasible and appropriate in light of current industry standards? If not, why not, and how long do Commenters believe these error correction timeframes should be and why? Are shorter timeframes feasible and appropriate in light of current industry standards? Why or why not?

197. To what extent do Commenters believe the CAT NMS Plan's T+5 regulatory access schedule to corrected and linked Order and Customer data would affect the accuracy, completeness, accessibility and/or timeliness of CAT Data collected and maintained under the CAT? How?

198. To what extent do Commenters believe the Plan's three-day window of error correction would affect the accuracy, completeness, accessibility and/or timeliness of CAT Data collected and maintained under the CAT? How?

199. Regulators' technology teams would be required to work with the Plan Processor to integrate their applications under the CAT NMS Plan. What, if any, are the risks to this approach? Should the Plan Processor be required to enter into support contracts with regulators? If so, please explain. Describe what, if any, service contract terms should be set forth in the CAT NMS Plan or set forth in any related documents. Do Commenters have any concerns about the security or confidentiality of CAT Data resulting from a service contract between the Plan Processor and the regulators? If so, please explain. If Commenters have any security or confidentiality concerns resulting from a service contract between the Plan Processor and the regulators, please specify any appropriate service contract terms that would address the concerns.

200. How do Commenters believe the Plan Processor should set pricing for a regulator seeking additional functionality from the Plan Processor under the CAT? What, if anything, do Commenters believe should govern pricing for additional functionality by the Plan Processor? For example, should pricing or contract standards (*e.g.,* reasonable, commercially reasonable, etc.), agreed-upon profit margins—or minimums and maximums, etc.—be included under the CAT NMS Plan or any related documentation? If so, please explain.

201. Do Commenters believe the CAT NMS Plan appropriately encourages or incentivizes the Participants and the Plan Processor to incorporate new technology and to innovate? Does the CAT NMS Plan appropriately encourage or incentivize the Plan Processor to have a flexible and scalable solution? Do Commenters believe that the CAT NMS Plan would result in a CAT that has adequate system flexibility and scalability to incorporate improvements in technology and future regulatory, analytic and data capture needs? Why or why not?

202. Does the regulatory access approach set forth in the CAT NMS Plan provide regulators with sufficient tools to maximize their regulatory activities, actions, and improve their surveillances? If not, why not and what should be added?

203. The CAT NMS Plan provides that targeted queries and data extractions would be logged so that the Plan Processor can provide the Operating Committee, the Participants, and the Commission with monthly performance and usage reports including data such as the user ID of the person submitting the query and the parameters of the query. Do Commenters believe that the data to be recorded in these logs and provided in these reports to each Participant and to the SEC would be appropriate and useful? Should any data elements be added or removed from these reports?

204. Do Commenters believe it is appropriate for the Plan Processor and the Operating Committee to also have access to these logs and monthly performance and usage reports? How should the Plan Processor and

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[251] *Id.* at Appendix C, Section A.2.

[252] *Id.* at Appendix C, Section A.2(a). Appendix C, Section A.3(e) indicates this would be no later than noon EST on T+1. *Id.* at Appendix C, Section A.3(e).

[253] *Id.* at Appendix C, Section A.1(a)(iv); Appendix D, Section 6.1.

[254] *Id.* at Appendix C, Section A.2(a).

[255] *Id.* at Appendix C, Section A.2(b).

[256] *Id.* at Appendix C, Section A.2(c). Appendix C, Section A.2(d) addresses system service level agreements that the SROs and Plan Processor would enter into. *Id.* at Appendix C, Section A.2(d).

[257] *See* Section IV.H.5, *infra,* for further regulatory access related requests for comment.

Operating Committee be permitted to use these logs and reports? To the extent that these logs and reports are accessible by the Plan Processor and the Operating Committee, should any data elements be added or removed? Should additional details or requirements be added to the CAT NMS Plan to clarify what the content of these logs and reports would be and which parties would have access to them?

12. Security, Confidentiality, and Use of Data

The CAT NMS Plan provides that the Plan Processor is responsible for the security and confidentiality of all CAT Data received and reported to the Central Repository, including during all communications between CAT Reporters and the Plan Processor, data extraction, data manipulation and transformation, loading to and from the Central Repository, and data maintenance by the Central Repository.[258] The Plan Processor must, among other things, require that individuals with access to the Central Repository agree to use CAT Data only for appropriate surveillance and regulatory activities and to employ safeguards to protect the confidentiality of CAT Data.[259]

In addition, the Plan Processor must develop a comprehensive information security program as well as a training program that addresses the security and confidentiality of all information accessible from the CAT and the operational risks associated with accessing the Central Repository.[260] The Plan Processor must also designate one of its employees as Chief Information Security Officer; among other things, the Chief Information Security Officer is responsible for creating and enforcing appropriate policies, procedures, and control structures regarding data security.[261] The Technical Specifications, which the Plan Processor must publish, must include a detailed description of the data security standards for CAT.[262]

Appendix D of the CAT NMS Plan sets forth minimum data security requirements for CAT that the Plan Processor must meet.[263] For example, Appendix D enumerates various connectivity, data transfer, and encryption requirements such as that the CAT System must have encrypted internet connectivity, CAT Reporters must connect to CAT infrastructure using secure methods such as private lines or virtual private network connections over public lines, CAT Data must be encrypted in flight using industry standard best practices, PII data must be encrypted both at rest and in flight, and CAT Data stored in a public cloud must be encrypted at rest.[264] Additional requirements regarding data storage, data access, breach management, and PII data are also specified in Appendix D.[265]

In addition, the Participants must establish and enforce policies and procedures that ensure the confidentiality of the CAT Data obtained from the Central Repository, limit the use of CAT Data obtained from the Central Repository solely for surveillance and regulatory purposes,[266] implement effective information barriers between each Participant's regulatory and non-regulatory Staff with regard to CAT Data, and limit access to CAT Data to designated persons.[267] However, a Participant may use the Raw Data[268] it reports to the Central Repository for "commercial or other" purposes if not prohibited by applicable law, rule or regulation.[269]

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205. Do Commenters believe that the CAT NMS Plan appropriately allocates responsibility for the security and confidentiality of CAT Data among the Participants, the Plan Processor, and other parties? If not, how should these responsibilities be allocated?

206. Do Commenters believe that the data security requirements set out in Appendix D are appropriate and reasonable? Should any additional details or requirements be provided?

207. What, if any, specific details or requirements regarding data security and confidentiality do Commenters believe should be included in the information security program, training program, and Technical Specifications to be developed by the Plan Processor? Should additional details on the content of these programs and specifications be provided?

208. What, if any, specific details or requirements regarding data confidentiality do Commenters believe should be included in the policies and procedures to be developed by the Participants? Should additional details on the content of these policies and procedures be provided?

209. Do Commenters believe that the CAT NMS Plan includes sufficient safeguards to prevent the misuse of CAT Data by employees or agents of the Participants or other persons with access to the Central Repository? For example, do Commenters believe that requiring information barriers between regulatory and non-regulatory staff[270] and permitting the use of CAT Data only for regulatory, surveillance, and commercial or other purposes as permitted by law[271] are effective measures to prevent the misuse of CAT Data? Should the CAT NMS Plan set forth additional detail regarding the distinction between regulatory and non-regulatory staff and between the appropriate and inappropriate use of CAT Data for commercial or other purposes? Should the CAT NMS Plan prescribe any specific information barriers? If so, what should be prescribed in the CAT NMS Plan?

210. Do Commenters believe the data access and breach management provisions described in Appendix D of the CAT NMS Plan[272] are effective mechanisms for monitoring and preventing the misuse of CAT Data? Why or why not? Would any additional details or requirements make these provisions more effective?

211. Which persons or entities should have the responsibility to monitor for and prevent the misuse of CAT Data? For example, should the Chief Compliance Officer or the Chief Information Security Officer have this responsibility? Why or why not? Should additional details be provided to clarify where this responsibility lies?

212. Do Commenters believe it is appropriate for Participants to be permitted to use all Raw Data reported to the Central Repository for commercial purposes? If not, what particular types of Raw Data would be inappropriate to use for commercial purposes?

213. Do Commenters believe that the CAT NMS Plan adequately addresses the protection and security of PII in CAT? If not, why not and what should be added to the CAT NMS Plan? For example, should the CAT NMS Plan provide that PII is accessible only when required, that PII be properly masked,

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[258] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(f)(i), (iv).

[259] *Id.* at Section 6.5(f)(i).

[260] *Id.* at Sections 6.1(m), 6.12.

[261] *Id.* at Section 6.2(b).

[262] *Id.* at Section 6.9.

[263] *Id.* at Appendix D, Section 4.

[264] *Id.* at Appendix D, Section 4.1.1, 4.1.2.

[265] *Id.* at Appendix D, Section 4.1.3–4.1.6.

[266] The Commission notes that regulatory purposes includes, among other things, analysis and reconstruction of market events, market analysis and research to inform policy decisions, market surveillance, examinations, investigations, and other enforcement functions.

[267] *Id.* at Section 6.5(f)(ii), (g).

[268] Raw data is defined as "Participant Data and Industry Member Data that has not been through any validation or otherwise checked by the CAT System." *Id.* at Section 1.1.

[269] *Id.* at Section 6.5(f)(i).

[270] *See id.* at Section 6.5(f)(ii)(A).

[271] *See id.* at Section 6.5(f)(i)(A).

[272] *See id.* at Appendix D, Sections 4.1.4, 4.1.5.

and/or that it be safeguarded such that it would not be improperly accessible?

214. Do Commenters believe that there are alternative methods or information that could be used in lieu of requiring the reporting of Customer PII to the Central Repository that, without diminishing the quality of CAT Data available to regulators or impairing regulators' ability to use CAT Data to carry out their functions, would create less risk of a breach of the security or confidentiality of the personal information of Customers? If so, what methods or information, specifically, could serve as such an alternative to PII?[273]

215. Do Commenters believe that the CAT NMS Plan includes adequate requirements regarding the operational security of the CAT System? What, if any, additional details or requirements should be provided? Should the CAT NMS Plan require the Plan Processor to have the ability to monitor for threats, attacks, and anomalous activity on a 24/7 basis through a Security Operations Center ("SOC") or a similar capability? What would be the costs and benefits of such a requirement?

216. Appendix C of the CAT NMS Plan discusses solutions for encrypting data at rest and in motion. Appendix D of the CAT NMS Plan states that all CAT Data must be encrypted in flight, and PII Data must encrypted in flight and at rest. Do Commenters believe that the Plan's data encryption requirements are adequate for CAT Data and PII Data? Why or why not? Do Commenters believe that the CAT NMS Plan provides sufficient information and clarity regarding data encryption requirements? Do Commenters believe that there is a particular method for data encryption, in motion and/or at rest, that should be used?

217. Appendix D, Section 4.1.1 of the CAT NMS Plan states that the CAT System must have "encrypted internet connectivity." What are the risks, if any, of allowing Internet access from the Central Repository, even if encrypted? Please explain. Do Commenters believe that the encrypted connection requirement in the CAT NMS Plan should apply to communication paths from the Central Repository to the Internet and/or connections from CAT to/from trusted parties? What challenges would the Plan Processor face in implementing either option? Does one option provide more robust security than the other? Why or why not?

218. To the extent the requirement for "encrypted internet connectivity" applies to connectivity between the Central Repository and trusted parties such as the Commission and the Participants, do Commenters believe that the CAT NMS Plan should require that these parties and the Plan Processor enter into formal Memoranda of Understanding or Interconnection Security Agreements that document the technical, operational, and management details regarding the interface between the CAT System and these parties? Why or why not?

219. With respect to industry standards, do Commenters believe that the CAT NMS Plan should be updated to include standards and requirements of other NIST Special Publications ("SPs") that were not mentioned in Appendix D (*e.g.*, NIST SP 800–86 for incident handling, 800–44 for securing public-facing web servers, 800–146 for cloud security)? Why or why not?

220. Do Commenters believe that the Plan should be updated more broadly to include the NIST family of guidance documents? Why or why not?

221. Throughout the Plan, there are numerous references to leveraging "industry best practices" pertaining to compliance subjects such as system assessments and disaster recovery/business continuity planning. How do "industry best practices" compare to NIST guidance in these areas? Do Commenters believe that the Plan Processor should implement NIST guidance for the Plan rather than industry best practices? Why or why not?

222. The CAT NMS Plan states that the Plan Processor must conduct third party risk assessments at regular intervals to verify that security controls implemented are in accordance with NIST SP 800–53.[274] Do Commenters believe that the CAT NMS Plan should adopt the meaning and terminology of Security Assessment and Authorization as defined by the NIST and/or other NIST guidance in the CAT NMS Plan, particularly within the requirements set forth in Appendix D to the CAT NMS Plan? Why or why not?

223. Do Commenters believe that the CAT NMS Plan should include requirements regarding how the Plan Processor should categorize data from a security perspective? For example, should the Plan Processor be required to implement data categorization standards consistent with Federal Information Processing Standard ("FIPS") 199 or NIST SP 800–60? Why or why not? Would including data categorization requirements in the CAT NMS Plan improve data integrity, availability, segmentation, auditing, and incident response? Why or why not?

224. The CAT NMS Plan provides that CAT must follow NIST SP 800–137—Information Security Continuous Monitoring for Federal Information Systems and Organizations in addition to a limited number of related monitoring provisions.[275] Do Commenters believe that the CAT NMS Plan provides sufficient and robust information related to continuous monitoring program requirements? Why or why not?

225. Do Commenters believe the CAT NMS Plan adequately sets forth the roles and responsibilities of independent third party risk assessment functions, including the consistent description of their specific functions and performance frequency? For example, are the CAT NMS Plan independent third party risk assessment provisions consistent with "industry best practices"? Or should the CAT require a greater or lesser performance frequency than as described in the CAT NMS Plan? As another example, do the technical assessments described in Section 6.2, Appendix C, Section A.5, and the NIST SP 800–53 requirements noted in Appendix D, Section 4.2, adequately and clearly establish the roles and responsibilities of the parties assessing the technical aspects of the CAT?

226. Do Commenters believe the CAT NMS Plan should specify the general audit and independent assessment requirements and the proper timeframes for when those assessments should occur? For instance, are there assessments that may need to occur on an annual basis? If so, what are those assessments? Are there assessments that may need to occur more frequently? If so, what are those assessments and why do they need to occur more frequently?

227. Do Commenters believe that the CAT NMS Plan requirements for conducting ad hoc penetration testing and an application security code audit by a reputable third-party in Appendix D, Section 4.1.3 "prior to launch" and periodically as defined by SLAs are consistent with industry best practices? Should additional testing or audits be required? Why or why not? Should testing or audits be required to occur more frequently than required by the CAT NMS Plan and SLAs? Why or why not?

228. Do Commenters believe that the third party risk assessments and penetration tests required by the CAT

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[273] *See* Section III.B.7, *supra*, for additional PII related requests for comment.

[274] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 5.3.

[275] *See id.* at Sections 6.1(g), 6.10(c), Appendix C, Section A.4, Appendix D, Sections 2.2, 4.1.2, 4.1.4, 4.2, 8.3, 8.4.

NMS Plan could themselves compromise the security or confidentiality of CAT Data? Please explain.

229. In Section 6.2(b)(vi) of the CAT NMS Plan, the Chief Information Security Officer is required to report to the Operating Committee the activities of the Financial Services Information Sharing and Analysis Center ("FS–ISAC") or other comparable body. Do Commenters believe there are other cyber and threat intelligence bodies, in addition to FS–ISAC, that the Plan Processor should join? Why or why not?

230. Do Commenters believe the CAT NMS Plan effectively describes the verification process when CAT Reporters connect to the Central Repository network? For example, which specific individual(s) at a CAT Reporter would be allowed access to CAT for reporting and verification purposes? Should there be a public key exchange process?

231. Do Commenters believe the CAT NMS Plan provides sufficient detail regarding the ability of CAT to determine whether a regulator's queries are shielded from the Plan Processor (including its staff, officers, and administrators) as well as other regulators and users of CAT? If not, what specifically should be added to the CAT NMS Plan?

232. Do Commenters believe that the CAT NMS Plan should require an audit of all CAT Reporters' data security? If so, which person or entity should have responsibility for such an audit, and what should the scope and elements of the audit be? Please estimate the cost of such audits. What other changes, if any, should be made to the CAT NMS Plan to provide for the allocation of sufficient resources whereby such an audit could be carried out?

233. Do Commenters believe the CAT NMS Plan should require the Plan Processor to provide a "blanket" security authorization to operate ("ATO") document (or its equivalent) prior to CAT Reporters sending CAT Data?

IV. Economic Analysis

A. Introduction

When adopting Rule 613, the Commission noted that the adopted Rule permitted the SROs to consider a wider array of solutions than did the proposed Rule. The Commission stated its belief that, as a result, "the economic consequences of the consolidated audit trail now will become apparent only over the course of the multi-step process for developing and approving an NMS plan that will govern the creation, implementation, and maintenance of a consolidated audit trail."[276] In particular, the Commission noted its belief that "the costs and benefits of creating a consolidated audit trail, and the consideration of specific costs as related to specific benefits, is more appropriately analyzed once the SROs narrow the expanded array of choices they have under the adopted Rule and develop a detailed NMS plan."[277] The Commission also noted that a "robust economic analysis of . . . the actual creation and implementation of a consolidated audit trail itself . . . requires information on the plan's detailed features (and their associated cost estimates) that will not be known until the SROs submit their NMS plan to the Commission for its consideration."[278] Accordingly, the Commission deferred its economic analysis of the actual creation, implementation, and maintenance of the CAT until after submission of an NMS plan.

To assist in that analysis, Rule 613, as adopted, requires that the SROs: (1) Provide an estimate of the costs associated with creating, implementing, and maintaining the consolidated audit trail under the terms of the NMS plan submitted to the Commission for its consideration; (2) discuss the costs, benefits, and rationale for the choices made in developing the NMS plan submitted; and (3) provide their own analysis of the submitted NMS plan's potential impact on competition, efficiency and capital formation.[279] The Commission stated that it believed that these estimates and analyses would help inform public comment regarding the CAT NMS Plan and would help inform the Commission as it evaluates whether to approve the CAT NMS Plan.[280]

The Commission is sensitive to the economic effects of the CAT NMS Plan,[281] including its costs and benefits and its impact on efficiency, competition and capital formation. In the Adopting Release for Rule 613, the Commission considered the economic effects of the actions the SROs were required to take upon approval of the adopted Rule, specifically the requirement that the SROs develop an NMS plan, utilizing their own resources and undertaking their own research, that addresses the specific details, cost estimates, considerations, and other requirements of the Rule.[282] As noted in the Adopting Release, however, Rule 613 provided the SROs with "flexibility in how they [chose] to meet the requirements of the adopted Rule,"[283] allowing the SROs to consider a number of different approaches in developing the CAT NMS Plan.

In accordance with the approach articulated by the Commission in the Adopting Release, the Commission is hereby publishing its economic analysis of the CAT NMS Plan and is soliciting comment thereon. This Section reflects the Commission's preliminary analysis and conclusions regarding the economic effects of the creation, implementation and maintenance of the CAT pursuant to the details proposed in the NMS plan submitted to the Commission for its consideration. The analysis is divided into eight topics: (1) A summary of the expected economic effects of approving the CAT NMS Plan; (2) a description of the economic framework for analyzing the economic effects of approving the CAT NMS Plan; (3) a discussion of the current, or "Baseline," audit trail data available to regulators, and the sources of such data; (4) a discussion of the potential benefits of the CAT NMS Plan; (5) a discussion of the potential costs of the CAT NMS Plan; (6) an economic analysis of the CAT NMS Plan's impact on efficiency, competition, and capital formation; (7) a discussion of alternatives to various features of the CAT NMS Plan and to the CAT NMS Plan itself; and (8) a request for comment on the Commission's preliminary economic analysis.

B. Summary of Expected Economic Effects

As the Commission explained in the Adopting Release, the Commission believes that the regulatory data infrastructure on which the SROs and the Commission currently must rely is outdated for effective oversight of a complex, dispersed, and highly automated national market system.[284] In performing their oversight responsibilities, regulators today must attempt to cobble together disparate data from a variety of existing information systems, each lacking in completeness, accuracy, accessibility, and/or timeliness—a model that neither supports the efficient aggregation of data from multiple trading venues nor yields the type of complete and accurate market activity data needed for robust market oversight.[285] The Commission has analyzed the expected economic effects of the CAT NMS Plan in light of these existing shortcomings and the goal of improving the ability of SROs and the Commission to perform their regulatory activities to the benefit of investors.[286]

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[276] *See* Adopting Release, *supra* note 9, at 45725–6.

[277] *Id.*

[278] *Id.* at 45726.

[279] *Id.; see also* 17 CFR 242.613(a)(1)(vii), (viii), (xi), (xii).

[280] *See* Adopting Release, *supra* note 9, at 45726. Rule 613(a)(5) requires that "[i]n determining whether to approve the national market system plan, or any amendment thereto, and whether the national market system plan or any amendment thereto is in the public interest under [Rule] 608(b)(2), the Commission shall consider the impact of the national market system plan or amendment, as applicable, on efficiency, competition, and capital formation." 17 CFR 242.613(a)(5).

[281] *See* CAT NMS Plan, *supra* note 3.

[282] *See* Adopting Release, *supra* note 9, at 45726.

[283] *Id.* at 45725.

[284] *See id.* at 45723.

In general, the Commission preliminarily believes that, if approved, the CAT NMS Plan would result in benefits by improving the quality of the data available to regulators in four areas that affect the ultimate effectiveness of core regulatory efforts—completeness, accuracy, accessibility and timeliness.[287] The Commission preliminarily believes that the improvements in these data qualities that would be realized from approval of the CAT NMS Plan would substantially improve regulators' ability to perform analysis and reconstruction of market events, and market analysis and research to inform policy decisions, as well as perform other regulatory activities, in particular market surveillance, examinations, investigations, and other enforcement functions. Regulators depend on data for many of these activities and the improvements in the data qualities would thus improve the efficiency and effectiveness of such regulatory activities. As explained further below, these improvements could benefit investors by giving regulators more and better regulatory tools to provide investors with a more effectively regulated trading environment,[288] which could increase capital formation, liquidity, and price efficiency. Data improvements could enhance regulators' ability to provide investors and the public with more timely and accurate analysis and reconstruction of market events, and to develop more effective responses to such events.[289] Improved understanding of emerging market issues resulting from enhanced market analysis and research could inform regulatory policies that improve investor protection through better market quality, more transparency, and more efficient prices.

In terms of completeness, the Plan requires the reporting of certain additional data fields, events, and products.[290] More importantly, the CAT NMS Plan requires certain data elements useful for regulatory analysis to be available from a single data source. Having relevant data elements available from a single source would simplify regulators' data collection process and facilitate more efficient analyses and surveillances that incorporate cross-market and cross-product data.

With respect to the accuracy of available data, the Commission preliminarily believes that the requirements in the Plan would improve data accuracy significantly. For example, the Commission expects that the requirements to store the CAT Data in a uniform linked format and the use of consistent identifiers for customers and market participants would result in fewer inaccuracies as compared to current data sources. These accuracy improvements should significantly reduce the time regulators spend processing the data and finding solutions when faced with inaccurate data. The Commission preliminarily believes that the requirements in the Plan for clock synchronization and time stamp granularity would improve the accuracy of data with respect to the timing of market events, but the improvements would be modest. The Commission preliminarily believes that the Plan would improve regulators' ability to determine the sequence of a small percentage of market events relative to all surrounding events.[291]

The Commission also preliminarily believes that the Plan would increase the accessibility of data for SROs and the Commission, because regulators would be able to access the CAT Data directly.[292] This, coupled with the improvements in completeness, would vastly increase the scope of information readily available to regulators and significantly reduce the number of data requests from the several hundred thousand requests regulators make each year. The increased scope of readily available information should facilitate more data-driven regulatory policy decisions, broaden the potential surveillances, expand the opportunities for SRO and Commission analysis to help target broker-dealers and investment advisers for examinations and help to perform those examinations.

Finally, the Commission preliminarily believes that the CAT NMS Plan would improve the timeliness of available data. Because regulators would be able to access uncorrected data the day after an order event and would be able to access corrected and linked data five days after an order event,[293] many data elements would be available to regulators more quickly than they are currently and the amount of time regulators would need to acquire and process data before running analyses would be reduced. For example, the corrected and linked data available on T+5 would identify the customer account associated with all order events, information that currently takes ten days or longer for regulators to obtain and then need to link to other data sources for use. These improvements in timeliness, combined with improvements in completeness, accessibility, and accuracy discussed above, would improve the efficiency of regulatory analysis and reconstruction of market events, as well as market analysis and research that informs policy decisions, and make market surveillance, examinations, investigations, and other enforcement functions more efficient, allowing, for example, the SROs and the Commission to review tips and complaints more effectively.

The Commission notes that the Plan lacks information regarding the details of certain elements of the Plan likely to affect the costs and benefits associated with it, primarily because those details have not yet been determined, and this lack of information creates some uncertainty about the expected economic effects. As discussed further below, lack of specificity surrounding the processes for converting data formats and linking related order events creates uncertainty as to the anticipated improvements in accuracy because such processes have the potential to create new data inaccuracies. Lack of specificity surrounding the process for regulators to access the CAT Data also creates uncertainty around the expected improvements in accessibility. For example, while the Plan indicates that regulators would have an on-line targeted query tool and a tool for user-defined direct queries or bulk extraction,[294] the Plan itself does not provide an indication for how user-friendly the tools would be or the particular skill set needed to use the tools for user-defined direct queries. However, the Commission has analyzed the expected economic effects of the Plan to the extent possible with the information available, noting areas of uncertainty in its analysis where applicable. The Commission has also considered whether certain provisions related to the operation and administration of the Plan could mitigate some of the uncertainties.[295]

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[285] *See id.*

[286] The Commission noted current SRO audit trail limitations in the Proposing Release and the Adopting Release. *See* Proposing Release, *supra* note 9, at 32563–68; Adopting Release, *supra* note 9, at 45726–30. Rule 613 is designed to address these limitations.

[287] *See* Adopting Release, *supra* note 9, at 45727 (discussing four "qualities" of trade and order data that impact the effectiveness of core SRO and Commission regulatory efforts: Accuracy, completeness, accessibility, and timeliness); *see also* Section IV.E, *infra,* for a detailed discussion of the expected benefits of the CAT NMS Plan.

[288] *See* Section IV.E.2, *infra.*

[289] *See* Section IV.E.2.a, *infra.*

[290] *See* CAT NMS Plan, *supra* note 3, at Sections 6.3, 6.4; *see also* 17 CFR 242.613(c)(7).

[291] The CAT NMS Plan would also require that CAT Reporters' business clocks be synchronized to within 50 milliseconds of the time maintained by the NIST, which would increase the precision of the time stamps provided by the 39% of broker-dealers who currently synchronize their clocks with less precision than what is called for by the Plan. *See supra* note 125. Independent of the potential time clock synchronization benefits, the order linking data that would be captured in CAT should increase the proportion of events that could be sequenced accurately. This reflects the fact that some records pertaining to the same order could be sequenced by their placement in an order lifecycle (*e.g.,* an order submission must have occurred before its execution) without relying on time stamps. This information may also be used to partially sequence surrounding events.

[292] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.2, Appendix D, Section 8.1; *see also* 17 CFR 242.613(e)(2).

[293] CAT Data would be reported by 8:00 a.m. Eastern Time on day T+1 and made available to regulators in raw form after it is received and passes basic formatting validations with an error correction process completed by 8:00 a.m. Eastern Time on day T+5. While the Plan does not specify exactly when these validations would be complete, the requirement to link records by 12:00 p.m. Eastern Time on day T+1 gives a practical upper bound on this timeline. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Sections A.2(a), A.3(a), Appendix D, Section 6.2.

The Commission also preliminarily believes that more effective and efficient regulation of securities markets and market participants resulting from approval of the CAT NMS Plan could significantly benefit investors and the integrity of the market. For example, the Commission preliminarily believes that more effective and efficient surveillance and enforcement would detect a higher proportion of violative market activity. This additional detection could not only reduce violative behavior through potential enforcement actions, but through deterrence if market participants believe violative activities are more likely to be detected. Because violative activity degrades market quality and imposes costs on investors and market participants, reductions in violative activity would benefit investors and market integrity. Likewise, more effective and efficient risk assessment and risk-based examinations should more effectively facilitate the selection of market participants for examination who have characteristics that elevate their risk of violating the rules. Decreasing the amount of violative activity by targeting exams in this way would provide investors with a more effectively regulated trading environment and hence better market quality. Further, access to audit trail data that is comprehensive, accurate, and timely could improve regulatory reconstruction of market events, market analysis, and research resulting in an improved understanding of emerging market issues and regulatory policies that better encourage industry competition, thus improving investor protection through better transparency and more efficient prices.[296]

Further, regulatory initiatives that are based on a more thorough understanding of underlying events and their causes, and that are narrowly tailored to address any market deficiency, could improve market quality and thus benefit investors. Moreover, access to more complete and linked audit trail data would improve regulators' ability to analyze and reconstruct market events, allowing regulators to provide investors and the public with more accurate explanations of market events, to develop more effective responses to such events, and to use the information to assist in retrospective analyses of their rules and pilots.

The Commission has also evaluated the potential costs that would result from approval of the CAT NMS Plan. In particular, using information included in the Plan, information gathered from market participants through discussions, surveys of market participants, and other relevant information, the Commission has preliminarily estimated the potential costs associated with building and maintaining the Central Repository as well as the costs to report data to the Central Repository. Currently, the 20 Participants spend $154.1 million annually on reporting regulatory data and performing surveillance, while the approximately 1,800 broker-dealers anticipated to have CAT reporting responsibilities spend $1.6 billion annually on regulatory data reporting, for total current industry costs of $1.7 billion annually for regulatory data reporting and surveillance by SROs. The Commission preliminarily estimates the cost of the Plan as approximately $2.4 billion in initial aggregate implementation costs and recurring annual costs of $1.7 billion.[297] The primary driver of the annual costs is the data reporting costs for broker-dealers, which are estimated to be $1.5 billion per year. For both large and small broker-dealers, the primary driver of both current $1.6 billion reporting costs and projected $1.5 billion CAT reporting costs is costs associated with staffing. Estimates of the costs to build the Central Repository are based on Bids that vary in a range as high as $92 million. Current estimates of annual operating costs are based on Bids that vary in a range up to $135 million. The eventual magnitude of Central Repository costs is dependent on the Participants' selection of the Plan Processor, and may ultimately differ from estimates discussed above if Bids are revised as the bidding process progresses. Furthermore, the Plan anticipates a period of duplicative reporting responsibilities preceding the retirement of potentially duplicative regulatory data reporting systems; these duplicative reporting costs are likely to be significant.[298]

Drawing from the discussion in the CAT NMS Plan,[299] the Commission expects that, if approved, the Plan would have a number of additional economic effects, including effects on efficiency, competition, and capital formation. The Commission preliminarily believes that the Plan generally promotes competition. However, the Commission recognizes that the Plan could increase barriers to entry because of the costs to comply with the Plan. Further, the Commission's analysis identifies several limiting factors to competition but Plan provisions and Commission oversight could address such limiting factors. The Commission preliminarily believes that the Plan would improve regulatory analysis and reconstruction of market events, as well as market analysis and research that informs policy decisions. In addition, the Plan would improve enforcement related activities, including the efficiency of regulatory activities such as market surveillance, examinations, investigations, and other enforcement functions that could enhance market efficiency by reducing violative activity that harms market efficiency. Finally, the Commission preliminarily believes that the Plan could have positive effects on capital formation and allocative efficiency and that the threat of a security breach at the Central Repository is unlikely to significantly harm capital formation. The Commission recognizes that the Plan's likely effects on competition, efficiency and capital formation are dependent to some extent on the performance and decisions of the Plan Processor and the Operating Committee in implementing the Plan, and thus there is necessarily some uncertainty in the Commission's analysis. Nonetheless, the Commission believes that the Plan contains certain governance provisions, as well as provisions relating to the selection and removal of the Plan Processor, that mitigate this uncertainty by promoting decision-making that could, on balance, have positive effects on competition, efficiency, and capital formation.

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[294] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Sections 8.1.1, 8.1.2.

[295] *See* Section IV.E.3.d, *infra*.

[296] *See* Section IV.E.2.a, IV.E.2.b, *infra*.

[297] *See* Section IV.F.2, Table 9, *infra*.

[298] The economic analysis discusses duplicative reporting costs in Section IV.F.2, *infra*.

[299] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8; *see also* Section IV.G, *infra*.

The Commission notes that while the Participants developed the Plan in compliance with Rule 613 by considering information from industry representatives, the Commission has discretion to approve the Plan subject to changes or conditions that the Commission deems necessary or appropriate.[300] Therefore, as a part of this economic analysis, the Commission analyzed numerous alternatives to provisions of the CAT NMS Plan and to the CAT NMS Plan itself. The Commission analyzes alternatives to the approaches the Exemption Order permitted the Participants to include in the Plan;[301] alternatives to certain specific approaches in the Plan; alternatives to the scope of certain specific elements of the Plan; and the broad alternative of modifying OATS or another existing system to meet the requirements of Rule 613 instead of approving the Plan. Finally, the Commission requests comment on alternatives discussed in this economic analysis, alternatives considered in the Plan, and on whether the Commission should consider any additional alternatives.

C. Framework for Economic Analysis

As discussed above, the Commission is conducting an economic analysis of the CAT NMS Plan filed by the SROs on February 27, 2015, as amended, as anticipated in the Adopting Release for Rule 613.[302] In particular, the Commission has carefully evaluated the information in the CAT NMS Plan, including the twelve considerations required by Rule 613[303] and the details of the decisions left to the discretion of the SROs. The Commission has also considered information drawn from outside the Plan in order to assess potential economic effects not addressed therein. To provide context for this analysis, this Section describes the economic framework for the analysis and seeks to identify uncertainties within that framework.

1. Economic Framework

a. Benefits

The CAT NMS Plan would create a new data source that could replace the use of some current data sources for many regulatory activities. As such, the economic benefits of the CAT NMS Plan would come from any expanded and more efficient regulatory activities facilitated by improvements to the data regulators use. Therefore, the framework for examining benefits in this economic analysis involves first considering whether and to what degree the CAT Data would improve on the Baseline of current trading and order data in terms of the four qualities of accuracy, completeness, accessibility, and timeliness.[304]

Through these improvements in the data, the economic analysis then considers the degree to which the Plan would result in improvements to regulatory activities such as the analysis and reconstruction of market events, in addition to market analysis and research conducted by SROs and Commission Staff, as well as market surveillance, examinations, investigations, and other enforcement functions. These potential improvements, based on the regulatory objectives of the CAT NMS Plan described in the Adopting Release,[305] relate to the overall goal of substantially enhancing the ability of the SROs and the Commission to oversee securities markets and fulfill their regulatory responsibilities under the securities laws. The economic analysis explores how the improvements to these regulatory activities provide economic benefits to investors and the market. Among other things, potential benefits that could result from the CAT NMS Plan include benefits rooted in changes in the behavior of market participants. For example, requirements to report certain data elements or events to the CAT could have the beneficial effect of deterring rule violations because the inclusion of certain data fields and improvements in the ability to surveil for violations could increase the perceived costs of violating rules and regulations. Potential benefits could also stem from improved investor protection, such as from more effective surveillance and more informed, data-driven rulemaking.

(1) Data Qualities

In the Adopting Release, the Commission identified four qualities of trade and order data that impact the effectiveness of core SRO and Commission regulatory efforts: Accuracy, completeness, accessibility, and timeliness.[306] In assessing the potential benefits of the CAT NMS Plan, the Commission's economic analysis compares the data that would be available under the Plan to the trading and order data currently available to regulators to determine whether and to what degree the Plan would improve the available data with respect to those four qualities.

(2) Regulatory Activities

Any economic benefits would derive from how such improved data would affect regulatory activities. Therefore, to analyze the potential benefits of the CAT NMS Plan, the economic analysis also evaluates the potential of the CAT NMS Plan to meet the regulatory objectives set out in the Adopting Release for Rule 613. The objectives are: Improvements in the analysis and reconstruction of broad-based market events; improvements in market analysis in support of regulatory decisions; and improvements in market surveillance, investigations, and other enforcement activities.[307]

A. Analysis and Reconstruction of Broad-Based Market Events

The economic analysis considers whether and to what extent the CAT NMS Plan would facilitate regulators' performance of analysis and reconstruction of market events, potentially helping to better inform both regulators and investors about such market events and speeding the regulatory response following market events. Regulators perform reconstructions of market events so that they and the public can be informed by an accurate accounting of what happened (and, possibly, why it happened). As discussed in the Benefits Section,[308] market reconstructions can take a significant amount of time, in large measure due to various deficiencies in the currently available trading and order data in terms of the four qualities described above.[309] The sooner regulators complete a reconstruction and analysis of a market event, the sooner investors can be informed and the sooner regulators can begin reviewing the event to determine what happened, who was affected and how, and whether the analysis supports potential regulatory responses.[310] In addition, the improved ability for regulators to generate prompt and complete market reconstructions could provide improved market knowledge, which could assist regulators in conducting retrospective analysis of their rules and pilots.

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[300] *See* 17 CFR 242.608(b)(1) ("No national market system plan . . . shall become effective unless approved by the Commission . . ."); 17 CFR 242.608(b)(2) ("Within 120 days of the date of publication of notice of filing of a national market system plan . . . the Commission shall approve such plan . . . with such changes or subject to such conditions as the Commission may deem necessary or appropriate, if it finds that such plan or amendment is necessary or appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanisms of, a national market system, or otherwise in furtherance of the purposes of the Act.").

[301] *See* Exemption Order, *supra* note 18.

[302] *See* Adopting Release, *supra* note 9, at 45789.

[303] *See* 17 CFR 242.613(a)(1).

[304] *See* Adopting Release, *supra* note 9, at 45727.

[305] *See id.* at 45730.

[306] *See id.* at 45727. Accuracy refers to whether the data about a particular order or trade is correct and reliable. Completeness refers to whether a data source represents all market activity of interest to regulators, and whether the data is sufficiently detailed to provide the information regulators require. While current data sources provide the trade and order data required by existing rules and regulations, those sources generally do not provide all of the information of interest to regulators in one consolidated audit trail. Accessibility refers to how the data is stored, how practical it is to assemble, aggregate, and process the data, and whether all appropriate regulators could acquire the data they need. Timeliness refers to when the data is available to regulators and how long it would take to process before it could be used for regulatory analysis. As explained in the Baseline, Section IV.D, *infra*, the trading and order data currently available to regulators suffers from deficiencies in all four dimensions.

[307] *See* Adopting Release, *supra* note 9, at 45730.

B. Market Analysis in Support of Regulatory Decisions

The economic analysis considers whether and to what extent the CAT NMS Plan would enhance the ability of the SROs and the Commission to conduct market analysis and research, including analysis of market structure, and the degree to which it would improve regulators' market knowledge and facilitate consideration of policy questions of interest. The SROs and Commission Staff conduct data-driven analysis on market structure, in direct support of both rulemaking and other regulatory decisions such as SRO rule approvals. The Commission also relies on such analysis to improve understanding of market structure in ways that could inform policy. Finally, SROs conduct market analysis and research on their own regulatory initiatives. Improvements in the ability to conduct market analysis could further improve analysis related to regulatory decisions and potentially influence those regulatory decisions to the benefit of investors and the markets more generally.

C. Market Surveillance and Investigations

The economic analysis examines whether the CAT NMS Plan would improve market surveillance and investigations, potentially resulting in more effective oversight of trading, better investor protection, and deterrence of violative behavior. As described in more detail in the Baseline Section,[311] both SROs and the Commission conduct market surveillance, examinations, investigations, and other enforcement functions targeting illegal activities such as insider trading, wash sales, or manipulative practices. Improvements in market surveillance and investigations could come in the form of "facilitating risk-based examinations, allowing more accurate and faster surveillance for manipulation, improving the process for evaluating tips, complaints, and referrals . . ., and promoting innovation in cross-market and principal order surveillance." [312]

b. Costs

The economic analysis evaluates the costs of building and operating the Central Repository; the costs of CAT reporting for Participants, broker-dealers, and service bureaus; and other CAT-related costs. Where the CAT NMS Plan provides estimates of these costs, the economic analysis evaluates those estimates and re-estimates them when necessary. The economic analysis also discusses the drivers of these costs, and whether broker-dealers may or may not pass these costs down to their customers. In addition, the economic analysis assesses whether the CAT NMS Plan has the potential to result in cost savings. Rule 613 requires the Plan to discuss "[a] plan to eliminate existing rules and systems (or components thereof) that would be rendered duplicative by the consolidated audit trail." [313] As a part of its consideration of the costs of the CAT NMS Plan, the economic analysis considers costs from duplicative reporting for some period of time as well as potential cost savings from the retirement of duplicative regulatory reporting systems.

The economic analysis also considers whether the CAT NMS Plan could result in second order effects, such as changes to the behavior of market participants, that impose certain costs. For example, the CAT NMS Plan's tiered funding model could lead to costly efforts by market participants to try to control their tiers in order to affect their fee payments, such as reducing activity levels near the end of an activity level measuring period to avoid being classified as a higher activity level firm. In addition, Participants, their members, and investors could incur costs if their private information were accessed in the event of a security breach of the Central Repository. The economic analysis considers these and other elements of the Plan that could lead to distortions in behavior by market participants.

2. Existing Uncertainties

The Commission has carefully analyzed the information in the CAT NMS Plan, as well as other relevant data, in order to assess the economic effects of the Plan. As discussed throughout the analysis, in certain cases the Commission lacks information needed to evaluate all of the potential economic effects of the CAT NMS Plan, creating uncertainty in some potential benefits and costs. The primary drivers of uncertainty include the fee schedule applicable to funding the Central Repository (the "Funding Model"), which has not yet been finalized, the deferral of decisions on certain discretionary elements including the Technical Specifications applicable to the CAT, and a lack of detailed information that would enable the Commission to assess certain economic effects with greater precision. The implications of each primary area of uncertainty for the Commission's economic analysis are discussed below.

First, as noted above, the economic analysis evaluates information provided in the CAT NMS Plan on the economic effects of the Plan, as well as information drawn from outside of the Plan. However, the Commission lacks detailed information regarding some of the individual costs and discretionary decisions in the Plan, including the Funding Model. Specifically, the Plan does not outline the proportion of CAT costs that would be allocated to Participants versus broker-dealers. This uncertainty limits the Commission's ability to evaluate the economic effects of the Plan in some cases. However, the Commission has analyzed the expected economic effects of the Plan to the extent possible with the information available, and where the Commission can identify such areas of uncertainty, the economic analysis addresses this uncertainty. In addition, the Commission requests comments to help resolve such uncertainties during the consideration of the CAT NMS Plan.

Second, certain elements of the CAT NMS Plan would not be finalized until after the selection of a "Plan

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[308] *See* Section IV.E.2.a, *infra.*

[309] *See* Section IV.C.1.a(1), *supra.*

[310] *See* Adopting Release, *supra* note 9, at 45732.

[311] *See* Section 0, *infra.*

[312] *See* Adopting Release, *supra* note 9, at 45730.

[313] 17 CFR 242.613(a)(1)(ix).

Processor." [314] Among these are the security and confidentiality procedures of the Central Repository,[315] the precise methods by which regulators would access data in the Central Repository,[316] and the complete Technical Specifications.[317] The Plan also provides the Plan Processor the "sole discretion" to publish interpretations of the Technical Specifications, including interpretations of permitted values in data elements.[318]

Because these and other elements of the Plan have not yet been finalized, the Commission cannot assess how and to what extent they could affect the overall economic effects of the Plan. The Commission's economic analysis is therefore limited to the extent that the economic effects of the Plan depend on decisions that would be made after approval of the Plan. However, the Commission has identified these areas of uncertainty and has assessed the economic effects of the Plan to the best of its ability in light of these existing uncertainties.

Given the range of possible outcomes with respect to both the costs and benefits of the CAT NMS Plan that depend on future decisions, the Commission also recognizes the importance of provisions of the Plan related to the operation and administration of the CAT. In particular, governance provisions of the Plan related to voting by the Operating Committee and the involvement of the Advisory Committee may help promote better decision-making by the relevant parties. Such provisions could mitigate concerns about potential uncertainty in the economic effects of the Plan by giving the Commission greater confidence that its expected benefits would be achieved in an efficient manner and that costs resulting from inefficiencies would be avoided. As part of this economic analysis, the Commission therefore considers these features of the Plan.[319]

3. Request for Comment on the Framework

The Commission requests comment on all aspects of the Framework for the Economic Analysis on the CAT NMS Plan. In particular, the Commission seeks responses to the following questions:

234. Do Commenters believe that the general economic framework applied in this analysis is appropriate? If not, which considerations should be added or removed?

235. Do Commenters agree with the approach to identifying benefits of the CAT NMS Plan? Are there important sources of benefits that are not discussed here? Are the data qualities important for regulatory uses? Are there additional data qualities that the Commission should consider? Are the regulatory objectives important and beneficial for investors? Are there additional regulatory objectives that the Commission should consider?

236. Do Commenters agree with the approach taken in this analysis for examining the costs of CAT? Please explain.

237. Do the Commenters agree with the approach for analyzing second order effects? Are there other sources of economic effects that the Commission should consider?

238. Do Commenters agree with the Commission's characterization of uncertainties in the economic analysis? How important are these uncertainties to the Commission's consideration of the CAT NMS Plan? Are there other sources of uncertainty that the Commission should consider?

239. Do Commenters agree with the Commission's preliminary assessment that governance provisions of the Plan related to voting by the Operating Committee and the involvement of the Advisory Committee may help promote better decision-making by the relevant parties and thus mitigate concerns associated with uncertainties in the economic effects of the Plan? Please explain.

D. Baseline

The CAT NMS Plan would create a new regulatory dataset that SROs and the Commission would use to supplement or replace their current data sources. The Adopting Release states that "improvements [in the quality of audit trail data] should have the potential to result in the following: (1) [I]mproved market surveillance and investigations; (2) improved analysis and reconstructions of broad-based market events; and (3) improved market analysis." [320] To assess the overall economic impact of the CAT NMS Plan, the economic analysis uses as the Baseline the current state of trade and order data and the current state of regulatory activity that relies on that data. The Baseline discusses the currently available sources of data, limits in available data that could impact regulatory activity, how regulators currently use the available data, and the burden that producing that data imposes on SROs and broker-dealers.

1. Current State of Regulatory Activities

The SROs and the Commission use data to analyze and reconstruct market events, conduct market analysis and research in support of regulatory decision-making, and conduct market surveillance, examinations, investigations, and other enforcement functions. The trend in this area is to use more automated and data-intensive methods as regulators' activities adjust to the data and technology available. The following Sections describe these regulatory activities and how regulators currently use data.

a. Analysis and Reconstruction of Market Events

In the Adopting Release, the Commission described how it expected CAT Data to significantly improve the ability of regulators to reconstruct market events so that the public might be informed by an accurate and timely accounting of the events in question.[321] In a market reconstruction, regulators seek to provide an accurate and factual accounting of what transpired during a market event of interest by conducting a thorough analysis of the available market data. These events often encompass activity in many securities across multiple trading venues, requiring the linking and analysis of data from multiple sources. Examples of recent market reconstructions include the Commodity Futures Trading Commission ("CFTC") and SEC's analysis of the May 6, 2010 "Flash Crash," [322] analysis of equity market volatility on August 24, 2015,[323] and the multi-agency report on the U.S. Treasuries market on October 15, 2014.[324]

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[314] *See* CAT NMS Plan, *supra* note 3, at Article VI. The Plan Participants have engaged in a bidding process to select a Plan Processor, and the leading candidate bidders have proposed different solutions. In certain instances, the Plan Participants have decided to adopt the solutions proposed by whichever bidder they select.

[315] *See* Section 0, *infra,* for additional discussion of risks and uncertainties related to data security.

[316] Rule 613(e)(1) requires the CAT NMS Plan to create a Central Repository to collect, link, and store CAT Data and to make that data available to regulators. *See* 17 CFR 242.613(e)(1).

[317] The CAT NMS Plan contains minimum standards and principles for setting many of Technical Specifications, *see* CAT NMS Plan, *supra* note 3, at Section 6.9, and the Commission's economic analysis reflects those minimum standards and principles. However, because the detailed Technical Specifications are not yet finalized by the Participants, the Commission cannot fully assess any corresponding costs and benefits.

[318] *See id.* at Section 6.9.

[319] *See* Section 0, *infra.*

[320] *See* Adopting Release, *supra* note 9, at 45730.

[321] *See id.* at 45732–33.

[322] *See* Findings Regarding the Market Events of May 6, 2010: Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues (September 30, 2010) ("Flash Crash Analysis"), *available at http://www.sec.gov/news/studies/2010/marketevents-report.pdf.*

b. Market Analysis and Research

In the Adopting Release, the Commission described how it expected CAT Data to improve the ability of regulators to monitor overall market structure and better understand its relationship with market behavior, so that the Commission and the SROs could be better informed in their policy decisions.[325] The Commission and SRO Staffs conduct data-driven analysis on market structure, in direct support of both rulemaking and other regulatory decisions such as SRO rule approvals as well as retrospective analyses of rules and pilots. The Commission also relies on data analysis to inform its market structure policy. SROs also conduct market analysis and research on their own regulatory initiatives. Examples of data-driven market analysis include reports on OTC trading,[326] small capitalization stock trading,[327] the Limit Up-Limit Down Pilot,[328] short selling,[329] and high frequency trading.[330]

c. Market Surveillance and Investigations

Regulators perform market surveillance and investigation functions that rely on access to multiple types of market data. In the Adopting Release, the Commission discussed how data limitations impact surveillance and investigations, including risk-based examinations, market manipulation investigations, tips and complaints, and cross-market and principal order surveillance.[331] The following Sections update and broaden the discussion from the Adopting Release to describe the current state of SRO surveillance and SRO and Commission examinations and enforcement investigations.

(1) Current SRO Surveillance

Rule 613(f) requires the SROs to develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the CAT Data.[332] For the purposes of this economic analysis, the Commission considers surveillance to involve SROs running automated processes on routinely collected or in-house data to identify potential violations of rules or regulations. As such, surveillance does not include processes run on data that the SROs request only when needed. SRO surveillance can help protect investors by having systems in place that can be used to detect fraudulent behavior and anomalous trading. For instance, SROs use surveillance systems, developed internally or by a third party, to detect violations of trading rules, market abuse, or unusual behavior, in real time, within one day, or within a few weeks of the activity in question. The exchanges are responsible for surveillance of their own exchanges, and FINRA is responsible for off-exchange and cross-market surveillance. FINRA also provides surveillance services to U.S. equity and options exchanges through regulatory services agreements with nearly every equity market and all options exchanges.[333] FINRA also currently conducts several cross-market surveillance patterns, such as surveillance focused on wash sales, front running, relationship trading, and high frequency trading.

FINRA has responsibility to oversee and regulate OTC trading of exchange-listed and non-exchange-listed securities, as well as trading in corporate and municipal debt instruments and other fixed income instruments. Also, FINRA conducts cross-market surveillance for approximately 99% of the listed equity market and approximately 70% of the listed options market.[334] To conduct cross-market surveillance, FINRA uses a variety of online and offline surveillance techniques and programs to reconstruct market activity, using trading data and quote information that is captured throughout the trading day, as well as order audit trail data reported daily. FINRA's cross-market surveillance is able to identify a single broker-dealer's manipulative activity across multiple markets, as well as manipulative activity of multiple market participants acting in concert across multiple markets.[335]

Additional surveillance is conducted by exchange-operating SROs, some of it conducted as trading activity occurs. This surveillance can include detection of market manipulation, violations of trading rules, and other unusual behavior.

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[323] *See* Staff of the Office of Analytics and Research, Division of Trading and Markets, Research Note: Equity Market Volatility on August 24, 2015 (Dec. 2015) *available at http://www.sec.gov/marketstructure/research/equity_market_volatility.pdf*; *see also* Austin Gerig and Keegan Murphy, The Determinants of ETF Trading Pauses on August 24th, 2015, White Paper (February 2016) *available at http://www.sec.gov/marketstructure/research/determinants_eft_trading_pauses.pdf*.

[324] *See* U.S. Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Reserve Bank of New York, U.S. Securities and Exchange Commission, and U.S. Commodity Futures Trading Commission, Joint Staff Report: The U.S. Treasury Market on October 15, 2014 (July 13, 2015), *available at http://www.sec.gov/reportspubs/special-studies/treasury-market-volatility-10-14-2014-joint-report.pdf*.

[325] *See* Adopting Release, *supra* note 9, at 45733.

[326] *See* Laura Tuttle, Alternative Trading Systems: Description of ATS Trading in National Market System Stocks (October 2013) *available at http://www.sec.gov/divisions/riskfin/whitepapers/alternative-trading-systems-10-2013.pdf*; Laura Tuttle, OTC Trading: Description of Non-ATS OTC Trading in National Market System Stocks (March 2014), *available at http://www.sec.gov/dera/staff-papers/white-papers/otc-trading-white-paper-03-2014.pdf*.

[327] *See* Securities Exchange Act Release No. 74892, Order Approving the National Market System Plan to Implement a Tick Size Pilot Program (May 6, 2015), 80 FR 27514, 27534, 27541 (May 13, 2015); *see also* Charles Collver, A Characterization of Market Quality for Small Capitalization US Equities (September 2014), *available at http://www.sec.gov/marketstructure/research/small_cap_liquidity.pdf*.

[328] *See* SRO Supplemental Joint Assessment, *available at http://www.sec.gov/comments/4-631/4-631.shtml*; Memo to File from the Division of Economic and Risk Analysis regarding the Cornerstone Analysis of the Impact of Straddle States on Options Market Quality (February 8, 2016), *available at http://www.sec.gov/comments/4-631/4631-42.pdf*; *see also* Gerig and Murphy, *supra* note 323.

[329] *See* Memo to Chairman Christopher Cox from Daniel Aromi and Cecilia Caglio regarding an Analysis of Short Selling Activity during the First Weeks of September 2008, (December 16, 2008) *available at http://www.sec.gov/comments/s7-08-09/s70809-369.pdf*; Memo to Chairman Christopher Cox from Daniel Aromi and Cecilia Caglio regarding an Analysis of a Short Sale Price Test Using Intraday Quote and Trade Data (December 17, 2008) *available at http://www.sec.gov/comments/s7-08-09/s70809-368.pdf*; Memo from the Office of Economic Analysis regarding an Analysis of the July Emergency Order Requiring a Pre-borrow on Short Sales (January 14, 2009) *available at http://www.sec.gov/spotlight/shortsales/oeamemo011409.pdf*.

[330] *See* Austin Gerig, High-Frequency Trading Synchronizes Prices in Financial Markets, *available at http://www.sec.gov/dera/staff-papers/working-papers/dera-wp-hft-synchronizes.pdf*; *see also* Staff of the Office of Analytics and Research, Division of Trading and Markets, Research Note: Equity Market Volatility on August 24, 2015 (December 2015) *available at http://www.sec.gov/marketstructure/research/equity_market_volatility.pdf*.

[331] *See* Adopting Release, *supra* note 9, at 45730–32.

[332] *See* 17 CFR 242.613(f).

[333] *See* Richard G. Ketchum, FINRA Chairman and CEO, Testimony Before the Subcommittee on Capital Markets and Government Sponsored Enterprises Committee on Financial Services (May 1, 2015), *available at https://www.finra.org/newsroom/speeches/050115-testimony-subcommittee-capital-markets-and-government-sponsored-enterprises*; Richard G. Ketchum, FINRA Chairman and CEO, Testimony Before the Subcommittee on Securities, Insurance and Investment, United States Senate (March 3, 2016), *available at http://www.finra.org/newsroom/speeches/030316-testimony-subcommittee-securities-insurance-and-investment-united-states*.

[334] *See* Richard G. Ketchum, FINRA Chairman and CEO, Testimony Before the Subcommittee on Securities, Insurance and Investment, United States Senate (March 3, 2016), *available at http://www.finra.org/newsroom/speeches/030316-testimony-subcommittee-securities-insurance-and-investment-united-states*.

[335] *See* FINRA 2015 Regulatory and Examinations Priorities Letter, at 14, *available at https://www.finra.org/sites/default/files/p602239.pdf*; *see also* FINRA 2016 Regulatory and Examinations Priorities Letter, at 12, *available at https://www.finra.org/sites/default/files/2016-regulatory-and-examination-priorities-letter.pdf*.

(2) Examinations

In the Adopting Release, the Commission explained how it expected CAT Data to facilitate risk-based examinations.[336] SROs currently conduct exams of broker-dealers for violations of trading-related federal laws, rules, and regulations and for violations of SRO rules and regulations.[337] In 2015, FINRA's Member Regulation Department conducted approximately 2,400 broker-dealer examinations.[338] The Commission currently conducts exams of broker-dealers, transfer agents, investment advisers, investment companies, municipal advisers, clearing agencies, the national securities exchanges, other SROs such as FINRA and the Municipal Securities Rulemaking Board, and the Public Company Accounting Oversight Board ("PCAOB"). The Commission conducted 493 broker-dealer examinations in 2014 and 484 in 2015, 70 exams of the national securities exchanges and FINRA in 2014 and 21 in 2015. In addition, the Commission conducted 1,237 investment adviser and investment company examinations in 2014 and 1,358 in 2015. Virtually all investment adviser examinations and a significant proportion of the Commission's other examinations involve analysis of trading and order data.

Examinations of broker-dealers and investment advisers involve intensive analysis of trading data. Examinations seek to determine whether the entity being examined is: Conducting its activities in accordance with the federal securities laws, rules adopted under these laws, and SRO rules; adhering to the disclosures it has made to its clients, customers, the general public, SROs and/or the Commission; and implementing supervisory systems and/or compliance policies and procedures that are reasonably designed to ensure that the entity's operations are in compliance with the applicable legal requirements.[339]

The Commission and certain SROs, such as FINRA, use a risk-based approach to select candidates and to determine exam scope and focus.[340] "Risk-based examinations" seek to increase regulatory efficiency by using preliminary data analysis to direct examination resources towards entities and activities where risks of violative or illegal activity are the highest. The Commission uses risk and data analysis before opening an exam to identify broker-dealers and investment advisers for areas of focus such as suspicious trading, as well as during an exam to identify the particular activities of a broker-dealer or investment adviser that could trigger certain compliance and supervisory risks.

Because of the data-intensive nature of examinations, the Commission and SROs have systems, such as the Commission's National Exam Analytics Tool ("NEAT"), to combine, standardize, and analyze exam data. The NEAT system allows examiners to import trade blotter data to conduct commission analysis, cross trades analysis, bunch price analysis, trading pattern analysis, and restricted trade analysis. However, as discussed further below, there are limitations on the trade blotter data imported by the NEAT system.[341]

(3) Enforcement Investigations

The Adopting Release details how the Commission expects the CAT Data to aid in the analysis of potential manipulation.[342] The Commission and SROs undertake numerous investigations to enforce the securities laws and related rules and regulations, including investigations of market manipulations (*e.g.,* marking the close, order layering, spoofing,[343] wash sales, trading ahead), insider trading, and issuer repurchase violations. As noted below, the Commission estimates that 30–50% of enforcement investigations use trade and order data, and any of these types of investigations, in addition to numerous other investigations, could potentially utilize CAT Data.[344]

SROs rely primarily on surveillance to initiate investigations based on anomalies in the trading of securities. The Commission initiates enforcement investigations when SROs or others submit reliable tips, complaints, or referrals, or when the Commission becomes aware of anomalies indicative of manipulation. After the detection of potential anomalies, a tremendous amount of time and resources are expended in gathering and interpreting trade and order data to construct an accurate picture of when trades were actually executed, what market conditions were in effect at the time of the trade, which traders participated in the trade, and which beneficial owners were affected by the trade. In 2015, the Commission filed 807 enforcement actions, including 39 related to insider trading, 43 related to market manipulation, 124 related to broker-dealers, 126 related to investment advisers/investment companies, and one related to exchange or SRO duties. In 2014, the Commission filed 755 enforcement actions, including 52 related to insider trading, 63 related to market manipulation, 166 related to broker-dealers, and 130 related to investment advisers/investment companies, many of which involved trade and order data.[345] Similarly, FINRA brought 1,397 disciplinary actions in 2014 and 1,512 in 2015.[346]

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[336] *See* Adopting Release, *supra* note 9, at 45730–31.

[337] SEC Rule 17d–2 permits SROs to propose joint plans among two or more SROs for the allocation of regulatory responsibility. Where 17d–2 agreements are in place, SROs have joint plans with respect to their common members (*i.e.,* members of both/all the SROs party to an agreement under Rule 17d–2) for common rules (*i.e.,* rules that are identical or substantially identical). Commission approval of a plan filed pursuant to Rule 17d–2 relieves an SRO of those regulatory responsibilities allocated by the plan to another SRO. *See* 17 CFR 240.17d–2. Exchanges also enter into Regulatory Services Agreements ("RSAs") whereby one SRO contractually agrees to perform regulatory services for another. However, RSAs do not relieve the contracting SRO from regulatory responsibility for the performance of any regulatory services allocated pursuant to the RSA and are not filed with the Commission for approval.

[338] This estimate is based on Staff discussions with FINRA. *See also* FINRA overview of Member Regulation *available at http://www.finra.org/industry/member-regulation.*

[339] *See* SEC, Examination Information for Entities Subject to Examination or Inspection by the Commission (June, 2014), *available at http://www.sec.gov/about/offices/ocie/ocie_exambrochure.pdf.*

[340] FINRA conducts regulatory examinations by contract on behalf of all the options and equities exchanges, except for the Chicago Stock Exchange, Inc. ("CHX") and the National Stock Exchange, Inc. ("NSX"). Accordingly most exchanges also employ a risk-based approach to examination selection and scope. CHX examines members on a cycle basis. NSX recently resumed operations in December, 2015. *See* Securities Exchange Act Release No. 76640 (December 14, 2015), 80 FR 79122 (December 18, 2015).

[341] *See* Section IV.D.2.b, *infra.*

[342] *See* Adopting Release, *supra* note 9, at 45731.

[343] Layering and spoofing are manipulations where orders are placed close to the best buy or sell price with no intention to trade in an effort to falsely overstate the liquidity in a security.

[344] *See infra* note 345 and accompanying text. The percentage of enforcement investigations that could be expected to utilize CAT Data depends on the percentage of investigations that involve broker-dealers, investment advisers and investment companies.

[345] *See* Year-by-Year SEC Enforcement Statistics, *available at https://www.sec.gov/news/newsroom/images/enfstats.pdf.* The total number of actions filed is not necessarily the same as the number of investigations. An investigation may result in no filings, one filing, or multiple filings. Additionally, trade and order data may be utilized in enforcement investigations that do not lead to any filings.

[346] *See* FINRA statistics *available at http://www.finra.org/newsroom/statistics.*

(4) Tips and Complaints

The Adopting Release discussed how the Commission expected CAT Data to improve the processes used by the SROs and the Commission for evaluating tips and complaints.[347] Market participants or those with experience in analyzing market data sometimes notice atypical trading or quoting patterns in publicly available market data, and these observations sometimes result in a tip or complaint to a regulator. Regulators investigate thousands of tips and complaints each year. In fiscal years 2014 and 2015, the Commission received around 15,000 entries in its Tips, Complaints and Referrals ("TCR") system, approximately one third of which related to manipulation, insider trading, market events, or other trading and pricing issues.

Analysis of tips and complaints follows three general stages. First, regulators ensure that the tip or complaint contains sufficient information to facilitate analysis. The second stage involves a triaging effort in which regulators may use directly accessible data or make phone calls and other informal queries to determine if the tip or complaint is credible. For tips and complaints that seem credible, the third stage involves a more in-depth investigation or examination, which follows the processes described above for examinations and enforcement investigations.

2. Current State of Trade and Order Data

To assess how and to what degree the CAT NMS Plan would affect the trade and order data available to regulators, the economic analysis considers what data regulators use currently and the limitations in that data.

a. Current Sources of Trade and Order Data

The SROs and the Commission currently use a range of trading and order data sources for the regulatory activities discussed above. The types of data and ease of use can vary widely from one source to the next. Some data sources provide access to in-depth information on a narrow slice of the market, while others reveal more limited information but with broader market coverage. This Section reviews the primary sources of data currently available to regulators, describing the content of the data provided and examples of their specialized uses. There are limitations on each of the data sources discussed below that reduce their usefulness for regulatory purposes. These limitations and their impact on the ability of the SROs and the Commission to use the data sources for regulatory purposes are explained in Section IV.D.2.b below.

(1) SRO Data

Most SROs maintain audit trails that contain the trade and order data that they obtain from members. Regulators have access to at least three sources of audit trail data. First, the National Association of Securities Dealers ("NASD")[348] established its Order Audit Trail System ("OATS")[349] in 1998, which required NASD (n/k/a FINRA) members to report certain trade and order data regarding NASDAQ-listed equity securities.[350] OATS was later expanded to include OTC equity securities and all NMS stocks.[351] Second, beginning in 2000, several of the current options exchanges implemented the Consolidated Options Audit Trail System ("COATS").[352] Finally, each equity and options exchange keeps an audit trail of orders and trades that occur on its market.[353]

Specifically, for each of these stages in the life of an order, FINRA Rule 7440 requires the recording and reporting of the following information, as applicable, including but not limited to: For the receipt or origination of the order, the date and time the order was first originated or received by the reporting member, a unique order identifier, the market participant symbol of the receiving reporting member, and the material terms of the order;[354] for the internal or external routing of an order, the unique order identifier, the market participant symbol of the member to which the order was transmitted, the identification and nature of the department to which the order was transmitted if transmitted internally, the date and time the order was received by the market participant or department to which the order was transmitted, the material terms of the order as transmitted,[355] the date and time the order was transmitted, and the market participant symbol of the member who transmitted the order; for the modification or cancellation of an order, a new unique order identifier, original unique order identifier, the date and time a modification or cancellation was originated or received, and the date and time the order was first received or originated;[356] and for the execution of an order, in whole or in part, the unique order identifier, the designation of the order as fully or partially executed, the number of shares to which a partial execution applies and the number of unexecuted shares remaining, the date and time of execution, the execution price, the capacity in which the member executed the transaction, the identification of the market where the trade was reported, and the date and time the order was originally received. FINRA Rule 7440 also requires reporting of the account type,[357] the identification of the department or terminal where an order is received from a customer, the identification of the department or terminal where an order is originated by a reporting member, and the identification of a reporting agent if the agent has agreed to take on the responsibilities of a reporting member under Rule 7450.

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[347] *See* Adopting Release, *supra* note 9, at 45731–32.

[348] In 2007, NASD and the member-related functions of NYSE Regulation, Inc., the regulatory subsidiary of New York Stock Exchange LLC ("NYSE"), were consolidated. As part of this regulatory consolidation, the NASD changed its name to FINRA. *See* Securities Exchange Act Release No. 56146 (July 26, 2007), 72 FR 42190 (August 1, 2007). FINRA and the National Futures Association ("NFA") are currently the only national securities associations registered with the Commission; however, the NFA has a limited purpose registration with the Commission under Section 15A(k) of the Exchange Act. 15 U.S.C. 78o–3(k); *see also* Securities Exchange Act Release No. 44823 (September 20, 2001), 66 FR 49439 (September 27, 2001).

[349] *See* Securities Exchange Act Release No. 39729 (March 6, 1998), 63 FR 12559 (March 13, 1998) (order approving proposed rules comprising OATS) ("OATS Approval Order").

[350] The FINRA Web site states: "FINRA has established the Order Audit Trail System (OATS), as an integrated audit trail of order, quote, and trade information for all NMS stocks and OTC equity securities. FINRA uses this audit trail system to recreate events in the life cycle of orders and more completely monitor the trading practices of member firms." FINRA, OATS, *available at http://www.finra.org/industry/oats* (listing further information on OATS).

[351] *See* Securities Exchange Act Release No. 63311 (November 12, 2010), 75 FR 70757 (November 18, 2010) (order approving proposed rule change by FINRA relating to the expansion of OATS to all NMS stocks).

[352] *See, e.g., In the Matter of Certain Activities of Options Exchanges,* Order Instituting Public Administrative Proceedings Pursuant to Section 19(h)(1) of the Securities Exchange Act of 1934, Making Findings and Imposing Remedial Sanctions, Securities Exchange Act Release No. 43268 (September 11, 2000) ("Options Settlement Order"); Securities Exchange Act Release No. 50996 (January 7, 2005), 70 FR 2436 (January 13, 2005) (order approving proposed rule change by Chicago Board Options Exchange, Incorporated ("CBOE") relating to Phase V of COATS).

[353] *See, e.g., infra* notes 358–364 and accompanying text. For example, the NYSE tracks counterparties on every trade in its Consolidated Equity Audit Trail Data ("CAUD") system, and records electronic order events in a System Order Data ("SOD") database. *See* Proposing Release, *supra* note 9, at 32564–68 (proposing Consolidated Audit Trail and discussing equity exchange audit trails). The SROs provided data in various proprietary formats to the Commission in support of the investigation of the May 6th, 2010 "Flash Crash." These data sources are briefly discussed in the Flash Crash Analysis, *supra* note 322.

[354] The specific information required to be reported includes: The number of shares; designation as a buy or sell or short sale; designation of the order as market, limit, stop, or stop limit; limit or stop price; date on which the order expires and if the time in force is less than one day, the time when the order expires; the time limit during which the order is in force; any request by a customer that a limit order not be displayed, or that a block size limit order be displayed, pursuant to Rule 604(b) of Regulation NMS; any special handling requests; and identification of the order as related to a program trade or index arbitrage trade. *See* FINRA Rule 7440(b).

[355] The specific information required includes the number of shares to which the transmission applies, and whether the order is an intermarket sweep order. *See* FINRA Rule 7440(c).

[356] For cancellations or modifications, the following information also is required: If the open balance of an order is canceled after a partial execution, the number of shares canceled; and whether the order was canceled on the instruction of a customer or the reporting member. *See* FINRA Rule 7440(d).

A majority of options exchanges require their members to provide the following information with respect to orders entered onto their exchange: (1) The material terms of the order;[358] (2) order receipt time;[359] (3) account type; (4) the time a modification is received; (5) the time a cancellation is received; (6) execution time; and (7) the clearing member identifier of the parties to the transaction.[360]

Although SROs that operate exchanges collect much of their audit trail information directly from their internal systems, broker-dealers also have the responsibility to report regulatory data to SRO audit trails. Some broker-dealers perform nearly all of these data reporting requirements in-house, whereas others contract with service bureaus to accomplish this data reporting.[361] This reporting can represent a significant burden on broker-dealers.

Audit trail data have become more useful to regulators over time. As noted above, FINRA expanded OATS from covering only NASDAQ listed securities to include OTC equity securities and all NMS stocks.[362] Commission Staff understands that FINRA has also begun collecting additional SRO audit trail data, provided voluntarily from most exchanges, to supplement OATS data. In addition, NYSE, NYSE Amex LLC (n/k/a "NYSE MKT LLC") ("NYSE Amex"), and NYSE ARCA, Inc. ("NYSE Arca") eliminated their OTS audit trail requirements and replaced them to coordinate with the OATS requirements, so that members who are also members of either FINRA or NASDAQ (and therefore subject to OATS requirements) are able to satisfy their reporting obligations by meeting the OATS requirements.[363] As a result of all of these changes, the combined data from these different audit trails[364] now cover most order events in equities.

SRO audit trail data is used for market reconstructions and market analyses, and to inform policy decisions, both by the Commission and by SROs. Regulators also use SRO audit trail data extensively for surveillance, examinations, investigations, and other enforcement functions. Current SRO market surveillance relies primarily on data from the SRO audit trails, generated directly from the exchange servers and from OATS. Likewise, SRO examinations and investigations pull information from their own audit trails before seeking data from others. Commission examinations and investigations also rely heavily on SRO audit trails to start the process of tracing a particular trade from its execution to the order initiations and customer information, and the audit trails can be useful for manipulation investigations or other regulatory activities that require analyses of microcap securities trading activity. There are, however, limitations on SRO audit trail data that reduce their usefulness to regulators. For example, for the examinations mentioned above, Commission examination Staff may undertake a laborious process of linking SRO audit trail data with EBS data, because SRO audit trail data does not contain customer information.[365] These and other limitations are discussed in Section IV.D.2.b, *infra*.

(2) Equity and Option Cleared Reports

The SROs and Commission also have access to equity and option cleared reports. Clearing broker-dealers report their equity and option cleared data on a daily basis and the NSCC and the OCC aggregate the data across the market and generate the reports.[366] The reports show the number of trades and daily cleared trade and share volume, by clearing member, for each equity and listed option security in which transactions took place. Regulators can query these reports directly through an internal online system that interfaces with the Depository Trust and Clearing Corporation ("DTCC") data by security name and CUSIP number.[367] The originating source of the DTCC cleared equity data is the Securities Information Automation Corporation ("SIAC") and the originating source of the cleared options data is the OCC.

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[357] "Account type" refers to the type of beneficial owner of the account for which the order was received or originated. Examples include institutional customer, individual customer, employee account, market making, and proprietary. *See* FINRA, OATS Reporting Technical Specifications, at 4–2, *available at http://www.finra.org/sites/default/files/OATSTechSpec_01112016.pdf.*

[358] The specific information required includes option symbol; underlying security; expiration month; exercise price; contract volume; call/put; buy/sell; opening/closing transaction; price or price limit; and special instructions. *See, e.g.,* BATS Exchange, Inc. ("BATS") Rule 20.7; BOX Options Exchange LLC ("BOX") Chapter V, Section 15; CBOE Chapter VI, Rules 6.24 and 6.51; NASDAQ Options Market ("NOM") Rule Chapter V, Section 7; NYSE Amex Rules 153, Commentary .01, and 962; NYSE Arca Rules 6.67, 6.68, and 6.69; and NASDAQ OMX PHLX LLC ("Phlx") Rules 1063 and 1080.

[359] The required information also includes identification of the terminal or individual completing the order ticket. *See id.*

[360] *See id.*

[361] *See* Section IV.F.1.c(2), *infra,* for a discussion of how broker-dealers decide whether or not to outsource their regulatory reporting.

[362] *See supra* note 351.

[363] *See* Securities Exchange Act Release No. 65523 (October 7, 2011), 76 FR 64154 (October 17, 2011) (concerning NYSE); Securities Exchange Act Release No. 65524 (October 7, 2011), 76 FR 64151 (October 17, 2011) (concerning NYSE Amex); Securities Exchange Act Release No. 65544 (October 12, 2011), 76 FR 64406 (October 18, 2011) (concerning NYSE Arca).

[364] Other SRO audit trails have varied reporting requirements. Some exchanges have detailed audit trail data submission requirements for their members covering order entry, transmittal, and execution. *See* CHX Article 11, Rule 3(b); NASDAQ Rules 6950–6958 (substantially similar to the OATS rules); NASDAQ OMX BX Rules 6950–6958 (substantially similar to OATS rules). The audit trail rules of the other exchanges incorporate only standard books and records requirements in accordance with Section 17 of the Exchange Act, 15 U.S.C. 78q. *See, e.g.,* NSX Chapter VI, Rule 4.1.; BATS Chapter IV, Rule 4.1; CBOE Rule 15.1 (applicable to CBOE Stock Exchange ("CBSX")); International Securities Exchange, LLC ("ISE") Rule 1400; NYSE Arca Equities Rule 2.24. One exchange only requires its members to make and keep books and records and other correspondence in conformity with Section 17 of the Exchange Act and the rules thereunder, with all other applicable laws and the rules, regulations and statements of policy promulgated thereunder, and with the exchange's rules. *See* NSX Chapter VI, Rule 4.1. Though not an audit trail, the Large Options Position Report ("LOPR") is also a source of SRO data that is used for surveillance, examination, and enforcement purposes by SRO and Commission staff. The data is collected pursuant to FINRA Rule 2360(b)(5), Reporting of Options Positions, under which each member must file a report for each account in which they have an interest in a position of 200 or more options contracts, on the same side of the market. Any increases or decreases in this position must also be reported. The Options Clearing Corporation ("OCC") is the service provider for the processing of these reports, which are used at will by the SROs for surveillance purposes. The Commission also frequently uses LOPR for enforcement investigations of insider trading and market manipulation cases.

[365] *See* Section IV.D.2.b, *infra.*

[366] NSCC provides clearing, settlement, risk management, central counterparty services and a guarantee of completion for certain transactions for virtually all broker-to-broker trades involving equities, corporate and municipal debt, American depositary receipts, exchange-traded funds, and unit investment trusts. *See* DTCC, About DTCC, NSCC, *available at http://www.dtcc.com/about/businesses-and-subsidiaries/nscc.aspx.* The OCC is an equity derivatives clearing organization that is registered as a clearing agency under Section 17A of the Act, 15 U.S.C. 78q–1, and operates under the jurisdiction of both the Commission and the CFTC. *See* OCC, About OCC, *available at http://www.optionsclearing.com/about/corporate-information/what-is-occ.jsp.*

[367] A CUSIP number is a unique alphanumeric identifier assigned to a security and facilitates the clearance and settlement of trades in the security.

Equity and option cleared reports provide a way for regulators to directly access a dataset to see how much trading volume is accounted for by a particular clearing broker. As such, these data are often used at the beginning of an examination or investigation to start identifying the market participants that may have additional data needed to pinpoint a particular activity. But there are limitations on these reports that reduce their usefulness to regulators. For example, the information available on the reports is limited to the date, the clearing firm, and the number of transactions cleared by each clearing firm on each SRO. These and other limitations are discussed in Section IV.D.2.b, *infra.*

(3) Electronic Blue Sheets

Broker-dealers provide detailed data to regulators in the form of EBS. The EBS data, provided pursuant to Rule 17a–25 under the Act,[368] facilitate investigations by the SROs and Commission Staff, particularly in the areas of insider trading and market manipulations. The EBS system provides certain detailed execution information in its electronic format[369] upon request by SRO or Commission Staff. This information often includes the employer of the beneficial owner of an account,[370] which can be important to insider trading investigations, and in some cases, a tax identification number.[371]

The EBS system also provides additional information on market participants who meet the definition of "large traders" and have self-identified to the Commission as required by Rule 13h–1.[372] Large traders who file Form 13H with the Commission are assigned a "large trader identification number" by the Commission and must provide that number to their brokers for inclusion in the EBS records that are maintained by the clearing brokers. Rule 13h–1, subject to relief granted by the Commission,[373] requires that execution time be captured (to the second) for certain categories of large traders. Large trader data provide the Commission with a way to acquire information about the activities of large traders and allow the activities of large traders to be more readily aggregated across or partitioned by multiple broker-dealers. Regulators generally use data from the EBS system extensively in enforcement investigations, for which EBS data are vital, particularly insider trading investigations. But again, there are limitations on EBS data. For example, EBS data are cumbersome to use for broad analyses, such as analysis and reconstruction of market events, market analysis and research, and some examinations, because of the fragmentation of the data. These and other limitations are discussed in Section IV.D.2.b, *infra.*

(4) Trade Blotters and Order Tickets

Investment advisers and broker-dealers maintain data in the form of order tickets and trade blotters that regulators can obtain on request.[374] Order tickets are in-house records maintained by investment advisers and broker-dealers that provide order details, including time stamps of order initiation and placement, special order types, any special instructions for the order, and plans for the allocation of shares and prices across accounts and subaccounts. Order tickets also identify account owners. Commission Staff collects order tickets regularly for examinations, and occasionally also for market manipulation investigations.

Broker-dealers maintain data in trade blotters that are similar to EBS. However, the trade blotters also contain more information, including the commissions paid in executing each order, time stamps of when an order is received and when it is executed (and the number of fills), and the pricing information for all executions in the order.[375] SROs use trade blotters in examinations of their members. Commission Staff uses trade blotters frequently for examinations, including in almost every broker-dealer, investment adviser, and hedge fund examination, as well as for insider trading and market manipulation investigations. Regulators use trade blotter data to determine the order entry time and execution time for trades by a particular customer in examinations and enforcement investigations. Trade blotters are also the primary data source used in regulatory investigations for which subaccount allocation information is important for determining violative behavior, such as cherry-picking and front-running cases. There are limitations on trade blotter and order ticket data that reduce their usefulness to regulators, however. For example, regulators lack direct access to these data; in order to acquire trade blotter and order ticket data, regulators need to send a request to each individual broker-dealer to obtain its data, which can be a lengthy and cumbersome process. These and other limitations are discussed in Section IV.D.2.b, *infra.*

See SEC, Fast Answers, CUSIP Number, *available at www.sec.gov/answers/cusip.htm.*

[368] 17 CFR 240.17a–25. Rule 17a–25 codified the requirement that broker-dealers submit to the Commission, upon request, information on their customer and proprietary securities transactions in an electronic format. The Rule requires submission of the same standard customer and proprietary transaction information that SROs request through the EBS system in connection with their market surveillance and enforcement inquiries.

[369] For a proprietary transaction, Rule 17a–25 requires a broker-dealer to provide the following information electronically upon request: (1) Clearing house number or alpha symbol used by the broker-dealer submitting the information; (2) clearing house number(s) or alpha symbol(s) of the broker-dealer(s) on the opposite side to the trade; (3) security identifier; (4) execution date; (5) quantity executed; (6) transaction price; (7) account number; (8) identity of the exchange or market where the transaction was executed; (9) prime broker identifier; (10) average price account identifier; and (11) the identifier assigned to the account by a depository institution. *See* Rule 17a–25(a)(1), (b)(1)–(3), 17 CFR 240.17a–25(a)(1), (b)(1)–(3). For customer transactions, the broker-dealer also is required to include the customer's name, customer's address, the customer's tax identification number, and other related account information. *See* Rule 17a–25(a)(2), 17 CFR 240.17a–25(a)(2); *see also infra* note 372 and accompanying text (discussing additional information on "large traders" reported through EBS).

[370] Employer information is required by some SRO EBS rules. *See, e.g.,* NYSE and FINRA Rule 8211. While employer information is not required under Rule 17a–25, Commission staff sometimes request and receive this information.

[371] Tax identification numbers are not required to be reported in EBS for average price, allocation, riskless principal, foreign accounts, and subaccounts.

[372] *See* Securities Exchange Act Release No. 64976 (July 27, 2011), 76 FR 46960 (August 3, 2011). A "large trader" is defined as a person whose transactions in NMS securities equal or exceed 2 million shares or $20 million during any calendar day, or 20 million shares or $200 million during any calendar month. SEC Rule 13h–1, 17 CFR 240.13h–1, requires those market participants who meet the definition of "large traders" to comply with a number of requirements, including filing Form 13H with the Commission to receive a large trader identification number. *Id.*

[373] *See* Securities Exchange Act Release No. 76322 (October 30, 2015), 80 FR 68590 (November 5, 2015).

[374] Rule 204–2 requires investment advisers to maintain a memorandum of each order given by the investment adviser for the purchase or sale of any security. 17 CFR 275.204–2(a)(3). Rule 17a–3(a)(1) requires broker-dealers to maintain a trade blotter. 17 CFR 240.17a–3(a)(1).

[375] Regulators could also request a trade confirmation instead of a trade blotter. A trade confirmation shows the customer, the symbol, execution price, trade date, settlement date and commission. A trade blotter is more detailed than a trade confirmation. A trade blotter is what a firm itself records and the exact information recorded varies by firm. Typically, regulators look to the trade confirmation when they have questions about the veracity of a firm's blotter, but generally prefer to request the trade blotter due to its greater detail.

(5) Trading and Order Handling System Data

Broker-dealers and exchanges also collect and maintain records of activity in their order handling systems and internal matching systems.[376] This data may include order receipt, modification or routing information not otherwise reported to SROs. Some elements of these data exceed the scope of information captured in EBS, SRO audit trail, trade blotter, or order ticket data; for example, SRO audit trail data sometimes excludes market-making activity. But certain market making activity is included in the data that broker-dealers and exchanges are required to maintain pursuant to Section 17(a) of the Act[377] and Rule 17a–3 thereunder.[378] Regulators use these trading and order handling system data in investigations and examinations to further analyze issues discovered during their analysis of data from other sources. Like other current sources of data, there are limitations on trading and order handling system data that reduce their usefulness to regulators. For example, a lack of standardization results in variations in trading and order handling system data across broker-dealers. These and other limitations are discussed in Section IV.D.2.b, *infra.*

(6) Public Data

Exchanges and SROs also make data available to the public, in some cases on a commercially-available basis,[379] that regulators could access for their regulatory activities. One type of public data is "consolidated" data feeds that are disseminated by registered Securities Information Processors ("SIPs") pursuant to joint SRO plans.[380] For a fee, the SIPs distribute consolidated market data on recent equity and option transactions and the prevailing best quotes at each exchange to market data subscribers. In addition, all exchanges also make data available through direct data feeds. These feeds contain all data included in the SIP feed, but also include depth of book information[381] and, depending on the exchange, may include additional data, such as the submission, cancellation and execution of all displayed orders and auction imbalance information on the exchange, among other things.

The SEC's Market Information Data Analytics System ("MIDAS") uses information disseminated by the SIP feeds, as well as exchange direct feeds consisting of data that individual exchanges choose to sell to subscribers. In addition, at the request of Commission Staff, most equities exchanges produce and make public two datasets with information on short sales: A file of short selling volume by stock, which contains the short selling and total volume on that exchange by symbol, and a file of short selling transactions, which contains trade information such as time, volume, and price for each transaction involving a short sale.[382]

The Commission and SROs use these publicly available trade and order data to conduct market analyses, market reconstructions, examinations, and investigations. Because of the accessibility and ease of use of the public data, regulators often use it as a starting point or a basis of comparison to other data sources. For example, real-time surveillance can rely on SIP data, and some insider trading surveillance relies on information from other publicly available sources such as news sources. Further, investigations into short sale market manipulation sometimes start with an analysis of the short selling data. Some market analyses by regulators rely on public data alone.[383] However, there are limitations on these data that reduce their usefulness to regulators. For example, they do not provide customer information, order entry time, information about special order handling codes, counterparties, or member identifiers. These and other limitations are discussed in Section IV.D.2.b, *infra.*[384]

b. Current Limitations of Trade and Order Data

Although regulators have access to trade and order data from the sources described above,[385] the available data are, for various reasons, limited in terms of the four qualities discussed above. In terms of completeness, current sources do not represent all of the market activity of interest in sufficient detail in one consolidated audit trail. In terms of accuracy, current sources may reflect data errors, insufficiently granular clock synchronization and time stamps, errors introduced in the process of combining data from different sources, a lack of consistent customer and broker-dealer identifiers, and data that is too aggregated at the record level to provide the information regulators need. With respect to accessibility, the SROs and Commission lack direct access to most of the data sources described above, and with respect to timeliness, obtaining trade and order data from current sources and converting the data into a form in which they can be analyzed can involve a significant delay from the time of a particular event of interest.[386] The qualities of market data are important to the Commission's ability to fulfill its statutory mission in an efficient and effective manner. As a result of the limitations on current data sources, regulators are limited in their ability to perform the activities outlined in Section IV.D.1, above. Table 2: Currently Available Data Sources summarizes the key characteristics of the currently available data sources, which are discussed in more detail below.

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[376] Internal matching systems of broker-dealers may include Alternative Trading Systems ("ATSs") or automated trading systems that provide liquidity to received orders without interacting on a registered exchange. The Commission understands that some broker-dealers rely on their clearing firms to collect and maintain records relating to routed orders on their behalf. Broker-dealers that operate their own internal matching systems are more likely to collect and maintain their own records.

[377] 15 U.S.C. 78q(a).

[378] 17 CFR 240.17a–3. For example, market makers are only required to report information on orders that are executed.

[379] In other words, the exchanges and SROs sell the data publicly and regulators can purchase it.

[380] ICE serves as the operator for the Consolidated Tape Association ("CTA") Plan SIP and the Consolidated Quote System ("CQS") Plan SIP. These SIPs collect and disseminate information on quotes and trades in listed securities, other than NASDAQ listed securities. The NASDAQ Stock Market LLC serves as the operator for the Unlisted Trading Privileges ("UTP") Plan SIP, which collects and disseminates quote and trade information in NASDAQ listed securities.

[381] An exchange's order book consists of all unexecuted orders at each price. Order book data typically includes the depth (aggregated number of shares) of the displayed orders at each price and might include all prices in the order book or the depth at each price over a range of prices. Displayed orders consist of any order in which the submitter did not instruct that some or all of the order be hidden from display.

[382] *See* Short Sale Reporting Study, *infra* note 413, for more information on available short selling data and the demands for additional short selling data. This study also describes information regarding data from Form SH filings. For ten months starting during the financial crisis, the Commission required certain institutional investors to submit weekly reports of their short selling activity and positions.

[383] *See* Collver, *supra* note 327.

[384] *See also* Staff of the Office of Analytics and Research, Division of Trading and Markets, Research Note: Equity Market Volatility on August 24, 2015 (December 2015) *available at http://www.sec.gov/marketstructure/research/equity_market_volatility.pdf.*

[385] *See* Section IV.D.2.a, *supra.*

[386] As discussed above and in the Adopting Release, accuracy refers to whether the data about a particular order or trade is correct and reliable; completeness refers to whether the data represents all market activity of interest or just a subset, and whether the data is sufficiently detailed to provide the required information; accessibility refers to how the data is stored, how practical it is to assemble, aggregate, and process the data, and whether all appropriate regulators could acquire the data they need; and timeliness refers to when the data is available to regulators and how long it would take to process before it could be used for regulatory analysis. *See supra* note 306.

Table 2

	Customer Identifier	Broker- Dealer Identifier	Time Stamp[387]	Allocation information	Order Display Information	Buy-to-Cover Indicator	Special Handling Instructions	Routing/ Modification/ Cancellation information	Entire Lifecycle	Direct Access for Regulators	Off-Exchange Activity[388]	Timeliness of Data Compiling[389]
OATS	No	Yes	Yes (majority in milliseconds but some in seconds)	No	Yes (for limit orders)	No	Yes (conditional)	Yes	Yes (before order reaches exchange) No (once order reaches exchange)	No (except FINRA). Access can take several weeks	Yes	Raw Data: T+1 Corrected Data: T+5
COATS	No	Yes	Yes	No	No	No	No	Yes	No	No (except SROs w/r/t their own members)	No	Reported same-day, but separate file transmitted at latest T+1
SRO Audit Trails	No	Yes	Yes (majority in milliseconds but some in seconds)	No	No	No	No	Yes	No (only once order reaches exchange)	No (except SROs w/r/t their own trails). Access can take several weeks	No	As soon as a trade is executed.
Equity and Option Cleared Reports	No	No	No	No	No	No	No	No	No	Yes	Yes	Equity: T+3 Option: T+1
Electronic Blue Sheets	Yes (but not always consistent across broker-dealers)[390]	Yes (but not always consistent across broker-dealers)	Yes	No	No	No	No	No (except for certain cancellation information)	No	No. Access can take several weeks or months	Yes	10 business days after request is submitted
Trade Blotters/Order Tickets	Yes (but not always consistent across broker-dealers)	Yes (but not always consistent across broker-dealers)	Yes (can be requested, although not always reliable)	No	No	No	No	No	No	No. Access can take several days	Yes	Same-day
Trading and Order Handling System Data	Depends on the trader	Yes	Yes	No	No	No	No	Yes	Yes (except allocations)	No. Regulators must request this data (SEC asks for the data within 10 days)	Yes	Same day
Public/ Proprietary Data	No	No	Yes (varied between seconds and microseconds)	No	No	No	No	Yes (except non-displayed orders)	No	Yes	Yes	Same day

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[387] The CAT NMS Plan also requires CAT Reporters to synchronize their time clocks to the time maintained by the NIST with an allowable drift of 50 milliseconds. See CAT NMS Plan, supra note 3, at Section 6.8. According to a survey conducted by the FIF, 39% of responding broker-dealers currently synchronize their clocks with less precision than what is called for by the CAT NMS Plan. Thus, the CAT NMS Plan would also increase the accuracy of the time stamps used by certain broker-dealers. See supra note 127.

[388] Off-exchange activity includes currently reportable events that are not handled by a registered securities exchange.

[389] In this instance, "timeliness" refers to when the data are compiled at the source in question (e.g., when OATS receives data from reporting broker-dealers), not when they become available to regulators because that timeline can vary depending on the regulator in question. As shown in the "Direct Access for Regulators" column, it may still take several days, weeks, or months for regulators to be able to access the data. For example, while OATS reporters provide the data at T+1, the SEC must request OATS data in order to access it, which may take several days or weeks. This narrower definition of timeliness is not used throughout this economic analysis.

[390] Guidance from FINRA indicates that broker-dealers must "identify the party to the trade" through EBS fields such as "Primary Party Identifier," but that party may be another broker-dealer rather than the ultimate customer. See FINRA, Electronic Blue Sheet Submissions, FINRA and ISG Extend Effective Date for Certain Electronic Blue Sheet Data Elements, Regulatory Notice 12-47 (Oct. 2012), available at https://www.finra.org/sites/default/files/NoticeDocument/p194655.pdf. Similarly, under the large trader rule, persons exercising "investment discretion" are reported through EBS, but in some cases such persons are investment advisers rather than their customers. See supra note 372 and accompanying text (discussing the large trader rule).

(1) Completeness

"Completeness" refers to whether the data represents all market activity of interest or just a subset, and whether the data is sufficiently detailed to provide the required information.[391] While current data sources provide trade and order data specified by existing rules and regulations, those sources do not contain all market activity that might be required for certain market inquiries, in sufficient detail, within one consolidated audit trail. To obtain information regarding a particular market event, regulators may have to piece together information from different data sources. Further, some data is not required to be reported at all under existing regulations.[392] Therefore, current data sources either cover only a limited number of events and products, or lack some data fields that would be useful to regulators, each of which impedes effective market surveillance.

A. Events and Products

There is currently no single data source that covers all market activities. EBS data contains executed trades but does not contain information on orders or quotes (and thus does not provide information on routes, modifications, or cancellations). Similarly, trade blotters and order tickets contain only information recorded by that particular broker-dealer or investment adviser and may contain limited information about full order lifecycles. SRO audit trail data are limited to identifying the activity of their members, can have incomplete information concerning their members, lack order lifecycle information occurring prior to receipt by an exchange, and may not contain information regarding principal trading. Furthermore, public consolidated and direct data feeds provide data about the entire market, but lack information regarding non-displayed orders and do not provide sufficient information to identify the different lifecycle events of a single order.

Individual SRO audit trails are extensive but still incomplete in their coverage of the activities of the market participants they cover; they contain only activity of their own members and many do not necessarily contain all activity by their members. For example, FINRA's OATS data does not include proprietary orders originated by a trading desk in the ordinary course of a member's market making activities, or options data. And while OATS collects data from FINRA members with respect to orders and trades involving NMS and OTC stocks, OATS does not include trade or order activity that occurs on exchanges or at broker-dealers that are not FINRA members.[393] In addition, while broker-dealers who are not members of FINRA must be members of an exchange SRO, an individual exchange SRO's audit trail data is generally limited to activity taking place on that exchange.[394] Because broker-dealers who are not members of FINRA may engage in trading activity in off-exchange markets, a substantial portion of the trading activity that an exchange SRO supervises is not reported to the supervising SRO.[395]

Further, not all FINRA members are obligated to report to OATS. FINRA's rules exempt from reporting certain members that engage in a non-discretionary order routing process.[396] Additionally, FINRA has the authority to exempt other members who meet specific criteria from the OATS recording and reporting requirements, and has granted approximately 50 such exemptions.[397]

Exchange audit trails also lack information on the order lifecycle events that occur prior to receipt at the exchange.[398] SRO audit trail data available from the Intermarket Surveillance Group ("ISG") [399] does not capture quotes/orders away from a market's inside market (*i.e.*, those quotes/orders below the best bid or above the best offer); currently identify market participants in a trade only to the clearing broker level; do not provide information on the executing broker; and contain certain data fields that are not mandatory.[400]

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[391] *See supra* note 306.

[392] *See, e.g.*, Adopting Release, *supra* note 9, at 45726–30, 45741, 45750 n.286, 45756 n.361 (discussing the incompleteness of the data recorded by existing audit trail systems such as OATS, acknowledging that "certain elements are not collected by existing audit trails," and noting that "existing SRO audit trails do not require customer information to be reported"); *see also* Proposing Release, *supra* note 9, at 32564–66, 32603 (discussing gaps in current required audit trail information and stating that the proposed rule would require "national securities exchanges, national securities associations, and their members to capture . . . information that is not currently captured under the existing audit trail or other regulatory requirements").

[393] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(A). OATS includes records showing the routing of an order to an exchange, but not the outcome of that routing. In performing its regulatory oversight of the markets, FINRA has created an internal process in which it augments the data it collects via OATS with trade execution data from other exchanges with which it has regulatory service agreements. This process provides FINRA with a wider view of the markets than OATS previously provided, but linking data across these sources does not yield fully accurate results. *See* Section IV.D.2.b(2), *infra* for a discussion of the accuracy of linking across data sources. *See infra* note 1060 for a discussion of FINRA's RSAs.

[394] Currently, Rule 15b9–1 offers an exemption from FINRA membership that applies if the firm is a member of a national securities exchange, carries no customer accounts, and has annual gross income of no more than $1,000 that is derived from securities transactions effected otherwise than on a national securities exchange of which it is a member (the 'de minimis allowance'). Income derived from transactions for that dealer's own account with or through another registered broker-dealer do not count toward the $1,000 de minimis allowance. However, the national securities exchanges have not generally supervised their members' activity outside of the markets they operate. The Commission has proposed modifications to Rule 15b9–1 that would require a dealer to be a member of a registered national securities association to conduct most off-exchange activity. *See* Securities Exchange Act Release No. 74581 (March 25, 2015), 80 FR 18035, 18042 (April 2, 2015) ("Exemption for Certain Exchange Members") (proposing to amend rule 15b9–1 and noting that "[n]on-Member Firms are not subject to oversight by [FINRA] and their off-exchange transactions typically are not overseen by the exchanges of which they may be members," and that "[e]xchanges traditionally have not assumed the role of regulating the totality of the trading of their member-broker-dealers . . .").

[395] *Id.* at 18043 n.85. Broker-dealers that are not FINRA members accounted for 48% of orders sent directly to ATSs in 2014. Therefore, OATS includes incomplete information on a substantial portion of off-exchange trading. As of March 2015, 125 of the approximately 4,209 registered broker-dealers were not members of FINRA. *Id.* at 18052. Orders from non-FINRA members accounted for 40% of orders sent directly to ATSs in 2013, and 32% in 2012. *Id.* at 18038 n.21.

[396] *See* FINRA Rule 7410 (Definitions). The Rule specifically excludes from the definition of "Reporting Member" members that (1) engage in a non-discretionary order routing process and route all of their orders either to a single receiving Reporting Member or two Reporting Members, provided orders are routed to each receiving Reporting Member on a pre-determined schedule and the time period for the schedule does not exceed one year; (2) do not direct or maintain control over subsequent routing or execution by the receiving Reporting Member; and (3) have a written agreement with the receiving Reporting Member that specifies the respective functions and responsibilities of each party to effect full compliance with the OATS recording and reporting rules. Finally, the receiving Reporting Member must record and report all required information pertaining to the order.

[397] *See* FINRA Rule 7470 (Exemption to the Order Recording and Data Transmission Requirements). The Rule provides that, for good cause shown, FINRA may exempt a member from its recording and reporting requirements if: (1) The member and current control affiliates and associated persons of the member have not been subject within the last five years to any final disciplinary action, and within the last ten years to any disciplinary action involving fraud; (2) the member has annual revenues of less than $2 million; (3) the member does not conduct any market making activities in NMS stock or OTC securities; (4) the member does not execute principal transactions with its customers; and (5) the member does not conduct clearing or carrying activities for other firms. This authority sunsets on July 10, 2019. Approximately 799 firms that are excluded or exempt from OATS would incur CAT reporting obligations if the Plan were approved; *see also infra* note 931, Section IV.F.1.c(2)B.i, *infra*.

[398] The Commission understands that exchange routing broker-dealers, which route orders from exchanges to other Execution Venues, do substantial business, but it is very hard in current data sources to track orders sent to one exchange that are then sent to another exchange or off-exchange venue by the exchange routing broker-dealer.

[399] The ISG was established in the early 1980s and is comprised of over 50 international exchanges, market centers, and market regulators that perform market surveillance in their respective jurisdictions. The purpose of the ISG is to provide a framework for the sharing of information and the coordination of regulatory efforts among exchanges trading securities, options on securities, security futures products, and futures and options on broad-

Additionally, some SRO audit trails do not include and are not required to include activity associated with principal trading, such as market-making activity. This may result in the exclusion of a significant amount of activity, particularly for firms with substantial market-making business activities. Principal trading activity represents a significant portion of market activity and there are aspects of the current market regime that may result in the underreporting of this trading activity. Indeed, an analysis by Commission Staff estimates that principal trading accounted for 40.5% of all reported transactions and principal activity accounted for 67% of all exchange message traffic.[401] And, because these figures do not capture principal activity done by trading on-exchange through other broker-dealers, these estimates are likely to be biased downwards.[402]

Finally, no single current data source integrates both equities and options. The lack of any combined equity and options audit trail data is a significant impediment to regulators performing cross-product surveillance.[403]

B. Data Fields

Each of the available data sources discussed above[404] is missing certain data fields that are useful for conducting a variety of regulatory activities. Furthermore, certain valuable data fields are not contained in any of the data sources discussed above. For example, the lack of completeness in the data sources makes it impossible to use certain key information, such as customer identifiers and allocation information, in market surveillance. Further, even for single-security events within a single trading venue, regulators may need to seek data from multiple sources such as an SRO audit trail and EBS.[405]

Most notably, the identity of the customer is unavailable from all current data sources that are reported to regulators on a routine basis. A unique customer identifier could be useful for many types of investigations and examinations such as market manipulation investigations and examinations of investment advisers. As noted above, some data sources—specifically Large Trader, EBS, trade blotters, and order tickets—identify customers.[406] But these data sources are not reported on a routine basis, provide only one part of the order lifecycle, and have other inherent limitations.

Because there is currently no data source that includes customer identities across multiple parts an order lifecycle,[407] regulators must engage in a process of linking EBS, trade blotters and order tickets with SRO audit trails, which can be a burdensome and imperfect process.[408] For example, trade blotter and order ticket data that identifies customers from one broker-dealer may only include customer names and thus may not be readily matched to similar data from another broker-dealer, or may require substantial effort and uncertainty to reconcile across firms. Further, EBS data's limited coverage of trading activity and lack of some detailed trade information creates inefficiencies in insider trading investigations. These investigations often begin with a request for EBS data of trades before a significant corporate news event that affected a company's stock price. After identifying accounts that made suspicious trades, investigators often request additional EBS data of all trades by the accounts during the same period. If the additional data reveal suspicious trades by the accounts of the securities of other companies, investigators often must make a third round of EBS requests for data of trades by all accounts in those securities. If trading is done in an omnibus account, Commission Staff must ask firms to provide the identity of the account holder, and then request account information. To investigate for manipulation (*e.g.*, marking the close, order layering, spoofing,[409] wash sales, trading ahead), Commission Staff may also link data from multiple sources. First, Commission Staff obtains equity and option cleared reports from an internal online system that interfaces with data provided by the DTCC. Because the equity and option cleared reports do not have trade details, Commission Staff may also request trade information through EBS submissions from one or multiple firms. If a trade was executed on behalf of another firm, Commission Staff may then contact the other firm, until Staff can find out who placed the trade and the account holder. The Commission may then obtain granular trade information that contains order entry time and order execution time from firms or brokers via request or subpoena.[410]

The methods for obtaining such information significantly reduce its utility, particularly for surveillance and market reconstruction purposes. Market reconstructions, for example, cannot take advantage of the detail in the EBS and trade blotter data because of the resources required to link so many data sources, lack of necessary elements (such as time stamps in milliseconds) needed to link data sources (for example, matching large trader reports to activity on a particular exchange), or the absence of standardized format. To examine a tip or complaint, regulators may consolidate data from each affected

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based security indexes, to address potential inter-market manipulations and trading abuses. In effect, the ISG is an information-sharing cooperative governed by a written agreement. ISG also provides a forum for ISG members to discuss common regulatory concerns, thus enhancing members' ability to efficiently fulfill their regulatory responsibilities. As a condition to membership, every ISG member must represent that it has the ability to obtain and freely share regulatory information and documents with other ISG members, generally unencumbered by rules, nationally imposed blocking statutes or bank secrecy laws. Regulatory information is only shared on an as-needed basis and only upon request, and any information shared through ISG must be kept strictly confidential and used only for regulatory purposes. The SEC is not a member of ISG, nor is ISG subject to regulatory oversight by the SEC.

[400] *See* Comment Letter from FINRA and NYSE Euronext regarding Proposing Release (August 9, 2010), *available at https://www.sec.gov/comments/s7-11-10/s71110-46.pdf*.

[401] The analysis used audit trail data (where orders are identified at the broker-dealer level), from 10 exchanges, excluding CHX, and OATS reported off-exchange activity. Message traffic was defined as order placement, cancellation, or amendment.

[402] The fact that off-exchange principal trading of non-FINRA member broker-dealers is not fully reported in OATS, may also bias these estimates downwards.

[403] Likewise no single audit trail combines futures with NMS Securities either. *See* Adopting Release, *supra* note 9, at 45744 for a discussion of the potential inclusion of futures in CAT Data.

[404] *See* Section IV.D.2.a, *supra*.

[405] *See* Section IV.D.2.a, *supra*, and Section IV.D.2.b(3) *infra*, for a discussion of how regulators access such data.

[406] Trade confirmation data also identifies customers, but trade confirmation data are much more basic than a trade blotter. *See supra* note 375.

[407] The Commission approved a FINRA rule that would require broker-dealers to report to OATS the identity of U.S. registered broker-dealers that are not FINRA members and broker-dealers that are not registered in the U.S. but have received an SRO-assigned identifier in order to access certain FINRA trade reporting facilities, from whom they receive or route an order. *See* Securities Exchange Act Release No. 77523 (April 5, 2016), 81 FR 21427 (April 11, 2016) (Order Approving FINRA Rule to Report Identity of Certain Broker-Dealers to OATS). CAT would similarly capture this information upon full implementation.

[408] For further discussion of the problems associated with linking, *see* Section IV.D.2.b(2)C, *infra*.

[409] *See supra* note 343.

[410] The process to obtain detailed trade information from firms and brokers via requests or subpoenas generally takes anywhere from two to four weeks depending on the size of the request.

market participant to determine the identities of those responsible for the atypical activity in question. To the extent that the activity originates from several market participants, regulators must request data from each of those market participants, and possibly other market participants, to obtain information that could identify the customer(s) originating the orders that created the atypical activity.

For many regulatory activities, lack of completeness results in regulators initially relying upon the most accessible data sources, with significant information contained only in data sources made available by request. Starting regulatory functions with incomplete data sources requires regulators to later make data requests and link such data request responses. More importantly, however, incomplete or unconsolidated data interferes with effective surveillance. Access to data through non-routine means makes investigations and examinations less efficient, and makes automated surveillance less accurate and less effective. For example, the publicly available data discussed above[411] identify exchanges but lack most of the fields found in some SRO audit trails or EBS, such as customer information, order entry time, order execution time, information about special order handling codes, counterparties, and member identifiers. Similarly, equity cleared reports contain only the date, the clearing firm, and the volume cleared by each clearing firm and not the trade size, trade time, or trade location. Option cleared reports contain only the date, the clearing firm, number of customer contracts, and number of firm contracts for the options.

Some valuable data fields, such as modifications that make an order non-displayed and other special handling instructions are consistently available on only a few data sources or require linking different data sources.[412] The lack of direct, consistent access to order display information and special handling instructions creates inefficiencies in surveillances, examinations, and investigations that examine hidden liquidity and the treatment of customer orders. Data that are not directly accessible by regulators at all include buy-to-cover information and subaccount allocation information, including the allocation time. For example, no current data source allows regulators to directly identify when someone is buying to cover a short sale. Regulators could use this information to better understand short selling and for investigations of short sale manipulation. Indeed, the absence of this information during the financial crisis in 2008 reduced the efficiency of the reconstruction of investor positions in financial companies.[413]

Subaccount allocation information needed for regulatory activities can be difficult for regulators to collect and compile. SRO audit trails currently do not require allocation reports and broker-dealers may not have records of the time of a subaccount allocation. When regulators require an understanding of subaccount allocations for a regulatory task, they generally request and sift through trade blotter or EBS data in an attempt to identify allocations and the details of those allocations. Current trade blotter data contains limited customer information on allocations and is not required to contain allocation time information at the subaccount level. While the Commission is sometimes able to acquire allocation time on trade blotters, not all broker-dealers keep records in a manner that facilitates efficient regulatory requests for allocation time information.

The difficulty in obtaining allocation information and the difficulty in reconstructing allocations with data from broker-dealers limits the efficiency of certain surveillances and examinations. Allocation time at the subaccount level is critical for determining whether some customers are systematically given more favorable allocation treatment than others. For example, when a broker-dealer places an order or series of orders for multiple customer accounts that generates multiple executions at multiple prices, it is possible that different customers receive different prices in the allocation process. However, if some customers systematically receive less favorable prices than others when they should be receiving the same prices for their executions, this could indicate that the broker-dealer is handling allocations improperly.[414]

(2) Accuracy

In the Adopting Release, the Commission noted that while "to some extent, errors in reporting audit trail data to the central repository will occur," the CAT NMS Plan would improve the quality of data including improvements to accuracy.[415] Therefore, the economic analysis carefully considers the Baseline of the accuracy of data regulators currently use in order to consider whether and to what degree the CAT NMS Plan would provide more accurate data.

The prospect of inaccurate data can result in regulators expending extra resources to run additional quality checks to ensure reliable data and conclusions in enforcement investigations, or being unable to draw reliable conclusions at all. In addition, risk-based analysis may not properly identify a potential risk that justifies further examination if the underlying data suffers from inaccuracies. Ultimately, inaccurate data results in less efficient investigations as well as less effective surveillance and risk analyses. This economic analysis considers several forms of data inaccuracy, including data errors, inaccurate event sequencing, the inability to link data accurately, inconsistent identifiers, and obfuscating levels of irreversible data aggregation.

A. Data Errors[416]

Based on Staff experience, the Commission preliminarily believes that data errors affect most current data and can persist even after corrections. For example, Commission Staff has investigated instances where information was inaccurately reported by broker-dealers, most notably in EBS data given to the Commission.[417] In addition, the Commission believes that data sources that depend on data translated from back-office systems can be less accurate than those that come from trading systems, such as trade blotters and data sourced from exchanges' electronic trading systems, because the data translation process creates an additional source of potential errors in code that may not work as intended. Data from trading systems can also contain errors resulting from a coding error in the query pulling the data. Such coding errors can affect any data including trade blotters. For example, trade blotters are stored using the ticker symbol in effect at the time of the trade. If the ticker symbol changes between the trade and the data request, the coding may fail to take the ticker symbol change into account and fail to retrieve the correct data. The Commission has found that trade blotter data can often be inaccurate due to improper inclusion of cancelled orders or corrections, making accurate reconciliation difficult. Furthermore, trade blotter data can lack security information including CUSIP, symbol, or description at the subaccount level, which are important features for helping regulators determine potential violations.[418]

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[411] *See* Section IV.D.2.a(6), *supra.*

[412] Order display information (*i.e.,* whether the size of the order is displayed or non-displayed) is indicated in the "Customer Instruction Flag" and special handling instructions are indicated in the "Special Handling Code" of an OATS report. The Customer Instruction Flag is mandatory if a limit or stop price is provided. A Special Handling Code is required for order modifications, reserve size orders, when the order is routed electronically to another member, or when the terms and conditions of the order were derived from a related options transaction. *See* FINRA, OATS Reporting Technical Specifications, at Appendix A (June 26, 2015), *available at http://www.finra.org/sites/default/files/TechSpec_20150825.pdf.* This data is not directly available to all regulators. The Commission must request this data from FINRA.

[413] Having access to buy-to-cover information was also one of the subjects of a Dodd-Frank-mandated study on short sale reporting. *See* SEC, Short Sale Position and Transaction Reporting (June 5, 2014) ("Short Sale Reporting Study"), *available at http://www.sec.gov/dera/reportspubs/special-studies/short-sale-position-and-transaction-reporting.pdf.*

[414] If a group of orders are bundled together for execution, when those same orders are allocated, they should receive the same (usually average price) allocations. However, if executions are for orders that are not bundled together, it might be appropriate that customers for those separate orders would receive differently-priced allocations.

[415] *See* Adopting Release, *supra* note 9, at 45730.

[416] As used herein, the term "data errors" refers to instances where data reflect false information or are missing information such that they do not reflect order events that occurred in the market fully and accurately. Under this definition of "data errors," a trading error or an order entry error would not be a "data error." For example, if a trader submitted an order to an exchange with an order size of 100,000, an accurate order record would contain an order size of 100,000. If the trader actually intended to enter the order size as 1,000, the accurate order record would still be 100,000 because that would reflect the actual state of the market at the time. In other words, the 100,000 order size is not a "data error." If the trader later corrected the order size, accurate data would reflect the subsequent corrections while still preserving the accurate state of the market at the time.

Audit trail data contain errors, as well. The CAT NMS Plan reports that 2.42% of order events submitted to OATS fail validation checks,[419] resulting in the rejection of almost 425,000 reports per day, on average.[420] While FINRA sends these records back to its members to correct, not all data errors are identified because OATS limits error correction requests to records with internal inconsistencies within a given member's submission. In particular, significant error rates in event linking are common because there is no cross-participant error resolution process; FINRA estimates that 0.5% of OATS routing reports directed to another FINRA member broker-dealer cannot currently be linked.[421] The CAT NMS Plan reports that, following the rollouts of three major updates to OATS, 0.86% of Trade Reporting Facility ("TRF") reported trades could not be matched to OATS execution reports, 3.12% of OATS route reports could not be matched to exchange orders, and 2.44% of inter-firm routes could not be matched to a record of the receiving firm's receipt of a routed order.[422]

Other audit trail data may also contain errors. For example, the Commission notes that exchange SROs populate most of the information with data from their in-house order and trading records, but a few of these exchange SROs also rely on members to complete their audit trails.

B. Event Sequencing

The ability to sequence market events is crucial to the efficacy of detecting and investigating some types of manipulation, particularly those involving high frequency trading, those in liquid stocks in which many order events can occur within microseconds, and those involving orders spread across various markets. In today's market, high frequency and algorithmic traders can react to changes in the market in a few milliseconds or less.[423] Investigations involving algorithmic trading, therefore, can require the ability to sequence the order and trade events to within a few milliseconds; however, regulators relying on currently available data may have difficulty sequencing events that occur within a second on different trading venues or broker-dealer systems.[424] In addition, in one type of trade-based manipulation, a manipulator might build a short position in a stock, submit sell orders designed to decrease the stock price, and finally buy at an artificially low price. To analyze this activity, except when cover orders precede the sell activity, it would be necessary to determine whether the orders intending to create an artificial price came before the orders intending to profit from the artificial price, which becomes difficult when the systems on which order events occurring close in time to each other have clocks that are not synchronized. Further, insufficiently granular time stamps can make sequencing events across venues impossible.

Thus, the sequencing of order events requires both sufficient clock synchronization across market participants and time stamps that are granular enough for accurate sequencing.[425] As discussed below,

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[417] For example, Commission staff have experienced frequent errors in EBS data such as omitted variables, decimals in the wrong places, blank account information, and data for the wrong securities. The Commission has instituted actions against entities in connection with inaccurate EBS data. *See, e.g.,* Securities Exchange Act Release No. 75445 (July 14, 2015), In the Matter of OZ Management, LP, Administrative Proceeding File No. 3–16686 (OZ Management, LP admitted submitting inaccurate data to four of its prime brokers); *see also* Section IV.D.2.b(4), *infra,* for a discussion of one impact of inaccurate data.

[418] In cases where Commission staff has used these data, it has found that the frequent omission of these important fields in trade blotter data is generally due to the manner in which the data is queried by broker-dealers. There are a variety of reasons why these fields may be excluded from a query. For example, over time firms make changes to their software systems; records stored by previous versions, particularly when the records are archived in a secondary location, may not be fully compatible with software that is written to access more current versions of this data. Additionally, sometimes when a broker-dealer or clearing firm merges or is acquired, its trade data may be compromised due to incompatible systems or inadequate data storage issues. This problem was particularly relevant following the financial crisis. Consequently, staff does not currently believe that this missing information is caused by a failure of broker-dealers to collect and retain these variables, but rather that over time this data becomes less accessible by software tools and may require hand processing by broker-dealers providing this information.

[419] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(b). When FINRA receives an end-of-day OATS file from a member, it performs over 152 validation checks on each order event reported to OATS. Each of these checks can result in rejecting an OATS data submission and generating an error message. In addition to validation checks, FINRA determines whether a file that is syntactically correct nevertheless contains errors in content related to internally inconsistent information about processing, linking, and routing orders. For some errors, FINRA requires the member to provide corrections within five business days after rejections are available. *See* OATS Reporting Technical Specifications, *supra* note 357, at 6–1—6–10. Duplicate records and records with symbols that are not reportable to OATS may result in rejections that do not require repair. *Id.* at 6–4. Validation checks refer to tests of whether data is consistent with a set of rules that specify conditions that should be met by valid data. Validation checks are typically limited to detecting errors that can be discovered by a concise set of logical rules using data within scope at the time the validation test is run. An incorrect price that is negative would likely be detected by a validation check, while a price that was a few cents too low may not. Validation checks that apply across multiple records may be difficult to apply across data that is submitted at different times.

[420] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(b); *see also* Adopting Release, *supra* note 9 at 45729.

[421] *See* Section IV.D.2.b(2)C, *infra.*

[422] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(b).

[423] *See, e.g.,* Joel Hasbrouck and Gideon Saar, *Low-Latency Trading,* 16 Journal of Financial Markets 646 (2013) in which the authors report apparent HFT response times to market events of 2–3 milliseconds. Given technology advances, it is likely that response times have decreased since their sample period, which ends in June 2008.

[424] Regulators can sequence events occurring on the same venue or on the same systems at broker-dealers, but sequencing across venues or broker-dealer systems that could have clocks that are not synchronized with each other is more difficult.

[425] For example, if two market participants report that two non-simultaneous events happened at 10:15:45, then the time stamps are not granular enough to sequence the events and regulators would need sub-second time stamp granularity to distinguish them. If the two market participants each have up to one-second clock drift from the actual time, the 10:15:45 time stamps only show that the event happened between 10:15:44 and 10:15:46. Only when regulators have both adequate time stamp granularity and sufficient clock offset

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current clock synchronization standards make this process difficult.

i. Clock Synchronization

Clock synchronization refers to the synchronization of the business clocks used by market participants for the purposes of recording the date and time of market events to a centralized benchmark clock, often that maintained by the NIST. Clock synchronization helps to ensure that the time stamps used by various participants are consistent, thereby allowing regulators to compare time stamps across participants and to use multiple time stamps to determine the sequence of market events. The ability of regulators to accurately sequence events can be limited by the permitted "offset" between the clocks—*i.e.,* the length of the gap that is permitted between a participant's clock and the time maintained by a centralized benchmark clock.[426] For example, if the offset between the clocks is one second, regulators cannot accurately determine the correct sequence of events in the market occurring within a two-second period, because each clock may be up to one second fast or slow.

Current rules require most broker-dealers to synchronize their system clocks to within one second. In particular, FINRA specifies a clock offset tolerance of one second,[427] and the NASDAQ Stock Market and NASDAQ OMX BX require members to comply with FINRA clock synchronization rules.[428] CHX specifies a clock offset tolerance of 500 milliseconds.[429] NYSE MKT and NASDAQ OMX PSX require members to synchronize their clocks relative to a time source designated by the Exchange, but do not specify the standard.[430] NYSE Arca allows options traders to use any time provider source for clock synchronization as long as the business clocks it uses on the Exchange are accurate to within three seconds of the NIST clock or the United States Naval Observatory Master Clock in Washington DC.[431]

In practice, some broker-dealers currently synchronize their clocks to smaller clock offset tolerances. FIF surveyed market participants to gather information on current broker-dealer clock synchronization practices.[432] The

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tolerances can events be sequenced using time stamps.

[426] For example, if a participant's clock records a point in time as 11:00:00 and the NIST clock records the same point in time as 11:00:01, then the offset between the clocks is one second.

[427] *See* FINRA Rule 7430 (requiring each member to "synchronize its business clocks that are used for purposes of recording the date and time of any event that must be recorded pursuant to the FINRA By-Laws or other FINRA rules, with reference to a time source as designated by FINRA, and shall maintain the synchronization of such business clocks in conformity with such procedures as are prescribed by FINRA."). Section 2 of the OATS Technical Specifications states that all computer system clocks and mechanical time stamping devices must be synchronized to within one second of the NIST clock and must be synchronized every day. *See* OATS Reporting Technical Specifications, *supra* note 357, at 2–1. In November 2014, FINRA issued a Regulatory Notice seeking comment on a proposal to change the clock offset tolerance to be 50 milliseconds. This proposal also proposed to move the clock offset tolerance from the OATS Technical Specifications to FINRA's books and records rules so that the requirements apply to the recording of the date and time of any event that FINRA By-Laws or Rules require, not just OATS requirements. *See* FINRA, Equity Trading Initiatives: Synchronization of Business Clocks, Regulatory Notice 14–47, *available at http://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_14-47.pdf.* On February 9, 2016, FINRA filed a proposed rule change with the Commission. The proposal would reduce the clock offset tolerance for members' computer clocks that are used to record events in NMS securities, including standardized options, and OTC Equity Securities, from within one second of the NIST atomic clock to within a 50-millisecond tolerance of the NIST atomic clock. FINRA would require firms with systems that capture time in milliseconds to comply with the new 50-millisecond clock offset tolerance within six months of the effective date; remaining firms that do not have systems which capture time in milliseconds would have 18 months from the effective date to comply with the 50-millisecond standard. The proposal would not change the current one-second clock offset tolerance of the NIST clock requirement for mechanical clocks or time stamping devices. The proposal would consolidate and codify the clock synchronization requirements in new FINRA Rule 4590. The Commission has published notice of this proposed rule change. *See* Securities Exchange Act Release No. 77196 (February 19, 2016), 81 FR 9550 (February 25, 2016).

[428] *See* NASDAQ Rule 7430A ("(a) Nasdaq members shall comply with FINRA Rule 7430 as if such Rule were part of Nasdaq's rules. (b) For purposes of this Rule, references to 'the FINRA By-Laws or other FINRA rules' shall be construed as references to 'the Nasdaq Rules'); NASDAQ OMX BX Rule 6953 ("(a) Exchange members shall comply with NASD Rule 6953 [superceded by FINRA Rule 7430] as if such Rule were part of the Exchange's rules. FINRA is in the process of consolidating certain NASD rules into a new FINRA rulebook. If the provisions of NASD Rule 6953 are transferred into the FINRA rulebook, then Equity Rule 6953 shall be construed to require Exchange members to comply with the FINRA rule corresponding to NASD Rule 6953 (regardless of whether such rule is renumbered or amended) as if such rule were part of the Rules of the Exchange. (b) For purposes of this Rule, references to 'the By-Laws or other rules of the Association' shall be construed as references to 'the Rules of the Exchange.' ").

[429] *See* CHX Rule 3, Interpretations and Policies .03 ("These rules shall not apply to orders sent or received through the Exchange's matching system or through any other electronic systems that the Exchange expressly recognizes as providing the required information in a format acceptable to the Exchange. The Exchange will not recognize a non-Exchange system as providing information in an acceptable format unless that system has synchronized its business clocks for recording data with reference to a time source designated by the Exchange and maintains that synchronization in conformity with procedures prescribed by the Exchange."); Rule 4, Interpretations and Policies .02 ("Each Participant or layoff service provider shall synchronize its business clocks that are used for purposes of recording the date and time of any event that must be recorded pursuant to this provision with reference to a time source as designated by the Exchange, and shall maintain the synchronization of such business clocks in conformity with such procedures as are prescribed by the Exchange."); Rule 5, Interpretations and Policies .01(a) ("Clock synchronization and timing of the determination of improper trade-throughs. The Exchange's systems shall routinely, throughout the trading day, use processes that capture the time reflected on the atomic clock operated by the National Institute of Standards and Technology and shall automatically make adjustments to the time recorded in the Exchange's Matching System to ensure that the period between the two times will not exceed 500 milliseconds. The Exchange shall determine whether a trade would create an improper trade-through based on the most recent NBBO that has been received and processed by the Exchange's systems.").

[430] *See* NYSE Rule 123, Supplementary Material .23 ("Any vendor or proprietary system used by a member or member organization on the Floor to record the details of an order or report for purposes of this rule must be synchronized with reference to a time source as designated by the Exchange."); NYSE MKT Rule 7430 ("Each member organization shall synchronize its business clocks that are used for purposes of recording the date and time of any event that must be recorded pursuant to the Rules of the Exchange, with reference to a time source as designated by the Exchange, and shall maintain the synchronization of such business clocks in conformity with such procedures as are prescribed by the Exchange."); NASDAQ OMX PSX Rule 3403 ("Each member organization shall synchronize its business clocks that are used for purposes of recording the date and time of any event that must be recorded pursuant to the rules of the Exchange, with reference to a time source as designated by the Exchange, and shall maintain the synchronization of such business clocks in conformity with such procedures as are prescribed by the Exchange.").

[431] *See* NYSE Arca Options Rule 6.20 ("(a) Each OTP Holder and OTP Firm must synchronize, within a time frame established by the Exchange, the business clocks that it uses for the purpose of recording the date and time of any event that must be recorded pursuant to the Rules of the Exchange. OTP Holders and OTP Firms may use any time provider source. Each OTP Holder and OTP Firm must, however, ensure that the business clocks it uses on the Exchange are accurate to within a three-second [sic] of the National Institute of Standards and Technology Atomic Clock in Boulder Colorado ('NIST Clock') or the United States Naval Observatory Master Clock in Washington DC ('USNO Master Clock'). This tolerance includes all of the following: (1) The difference between the NIST/USNO standard and a time provider's clock; (2) transmission delay from the source; and (3) the amount of drift of the OTP Holder or OTP Firm's business clock. For purposes of this Rule, 'business clocks' mean an OTP Holder or OTP Firm's proprietary system clocks. OTP Holders and OTP Firms must set forth in their written supervisory procedures, required by Rule 11.18, the manner in which synchronization of business clocks will be conducted, documented and maintained.").

[432] *See* FIF Clock Offset Survey, *supra* note 127. The Commission notes limitations to the survey that could result in downward bias and imprecision. Specifically, the broker-dealers represented by the survey are primarily complex and large broker-dealers in terms of market activity levels; consequently, smaller broker-dealers are underrepresented. But, as discussed below, the exclusion of small broker-dealers is unlikely to materially affect industry costs because smaller broker-dealers are unlikely to incur significant clock-synchronization costs because the majority of broker-dealers rely on service bureau clocks to time stamp their CAT Reportable Events.

survey found that 29% of respondents currently synchronize their clocks to permit a maximum clock offset of one second from NIST time.[433] The survey further found that 10% of market participants permit a maximum offset from NIST time that is between 50 milliseconds and one second, 21% of respondents permit a 50-millisecond maximum offset, and 18% of respondents permit a maximum offset that is less than 50 milliseconds. The remaining 22% of survey respondents utilize multiple clock offset tolerances across their systems, ranging from five microseconds to one second. FIF noted that 69% of firms that achieve a maximum clock offset of 50 milliseconds or less are large firms reporting more than three million OATS records per month.

Certain exchanges, the SIPs, and FINRA synchronize their clocks for their trading, recordkeeping, and other systems. According to FIF, all exchange matching engines meet a clock offset tolerance of 50 milliseconds.[434] However, NASDAQ recently stated that all exchanges trading NASDAQ securities synchronize their matching engines and quotation systems to within 100 microseconds.[435] The Commission understands that the NYSE, the options exchanges, and the SIAC SIP have comparable clock synchronization standards. In conversations with Commission Staff, the Participants stated that absolute clock offset on exchanges averages 36 microseconds.[436]

Because multiple order events can occur within timeframes of less than one second, current clock synchronization requirements and practices greatly limit the ability of regulators to accurately sequence order events. To examine, among other things, how many events can be synchronized with current clock offset tolerances, Commission Staff conducted an analysis of the frequency of events using MIDAS data.[437] In the analysis, events are all real-time messages, consisting of trades, orders, modifications, cancellations and updates from exchange direct feeds and trades from the FINRA TRFs. The analysis focused on identifying whether, for each order event, an event at another venue occurred within a given time range.[438] For the purposes of the analysis, events at another venue were called an "unrelated event." The Commission recognized that order events occurring on the same venue have sequence numbers that allow sequencing even if orders have the same time stamp. Therefore, the analysis considered only whether any unrelated orders existed within a given time range that could complicate the sequencing across the market.[439]

TABLE 3—PERCENTAGE OF EVENTS CLOSE TO UNRELATED EVENTS

Nearest event time stamped within	Percent of unrelated events	
	Equities	Options
2 seconds	98.69	93.03
1 second	97.95	90.99
100 milliseconds	92.16	81.17
50 milliseconds	89.12	76.59
10 milliseconds	83.49	64.46
5 milliseconds	81.28	58.26
2 milliseconds	77.92	49.30
1 millisecond	74.31	41.13
200 microseconds	57.53	21.58
100 microseconds	48.09	14.51
10 microseconds	21.42	3.13
5 microseconds	14.44	3.12

Table 3 shows that 97.95% of the order events for listed equities and 91% of order events for listed options in the samples occurred within one second of another unrelated order event in the same security. At the other extreme in Table 3, 14.44% of the unrelated order events for listed equities and 3.12% of the unrelated order events for listed options in the same security occurred within 5 microseconds of another order event in the same security. The Commission notes that Table 3 underestimates the true frequency of unrelated events within the given time frames because it includes only order events that are included in the MIDAS data. As such, the analysis is unable to include events such as the placing of hidden orders on exchanges, the placing of orders on an ATS, order originations, order routes, order receipts, and order cancellations and modifications for any order not displayed on an exchange order book. Despite this limitation, Table 3 illustrates how the current frequency of order events makes sequencing unrelated order events difficult.

ii. Time Stamps

Given the frequency with which order events can occur, regulators need sufficiently granular time stamps to sequence events across orders and within order lifecycles. As noted above, even if the clocks recording time stamps have no clock offset, the granularity of the time stamp can limit regulators' ability to sequence events accurately.[440]

Current data sources have different time stamp granularity standards. Many public data sources report time in seconds or milliseconds and some,

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[433] *Id.*

[434] *Id.*

[435] *See* NASDAQ, UTP Vendor Alert #2015–7 (April 24, 2015), *available at https://www.nasdaqtrader.com/TraderNews.aspx?id=UTP2015-07* (describing additional time stamps to be reported to the SIP, including information on exchange clock synchronization, and stating that "[e]xchanges use a clock sync methodology ensuring that timestamps are accurate within tolerances of 100 microseconds or less.").

[436] In response to questions from Commission Staff, the Participants surveyed the exchanges to establish their current average clock offset. All exchanges that currently operate matching engines responded to the survey, which measured the offset from the exchange clock to NIST. The Participants noted that the frequency with which exchanges measure their clock offset ranges from once per second to once per fifteen minutes, and the procedures to correct for clock offset vary. Some exchanges correct by slewing, in which the offset is gradually corrected, while others use stepping, in which the offset is immediately corrected. The process by which clock offset is corrected can impact the ability to order events time stamped by a single clock because stepping could result in a backwards adjustment in recorded time.

[437] The MIDAS system does not contain all of the events in a given security that would be in CAT. Therefore, the analysis is limited, but still provides useful insights.

[438] The methodology to calculate these percentages starts with sorting all event messages for every day chronologically by exchange time stamp. (MIDAS does not report the exchange time stamp; but it provides the difference between the MIDAS time stamp and the exchange or TRF time stamp; the analysis uses this value to derive the exchange time stamp.) For each event, it calculates the difference (Delta) between the current time stamp (t_0) and the last time stamp (t_{-1}) in the same security on a different venue.

$$\text{Delta}_{\text{nearest last}} = t_{0,\text{venue A}} - \text{maximum}(t_{-1,\text{venue B}}, t_{-1,\text{venue C}}, t_{-1,\text{venue D}}, t_{-1,\text{venue E}})$$

This is the shortest time difference ($\text{Delta}_{\text{nearest last}}$) between an event on venue A and a preceding event on any venue, except for venue A. Next, the analysis calculates the time difference ($\text{Delta}_{\text{nearest next}}$) between the current time stamp (t_0) and the next time stamp (t_1) in the same security on a different venue.

$$\text{Delta}_{\text{nearest next}} = \text{minimum}(t_{1,\text{venue B}}, t_{1,\text{venue C}}, t_{1,\text{venue D}}, t_{1,\text{venue E}}) - t_{0,\text{venue A}}$$

Finally, the analysis uses the shorter of the time differences to evaluate whether an event occurs within a particular time period of another event in the same security on a different venue.

$$\text{Delta}_{\text{nearest}} = \text{minimum}(\text{Delta}_{\text{nearest last}}, \text{Delta}_{\text{nearest next}})$$

Values are aggregated over one week (June 15, 2015 through June 19, 2015) for the equities analysis; and the options analysis data is from one day (June 15, 2015).

[439] Within the analysis, events reported to the TRF are treated as occurring on a different trading venue than other recent events because TRF data comprises many separate venues (such as ATSs and off-exchange market makers). While events within a single exchange with identical time stamps can potentially be sequenced through record identifiers recorded by the exchange, for TRF trades this is often untrue because many venues with independent clocks contribute to the aggregate TRF data.

[440] In addition, Craig W. Holden and Stacey Jacobsen, ***Liquidity Measurement Problems in Fast, Competitive Markets: Expensive and Cheap Solutions***, 69 Journal of Finance 1747 (2014), shows that using time stamps in seconds instead of milliseconds can yield liquidity measurement problems.

including direct data feeds, report time in microseconds or nanoseconds. For example, the Options Price Reporting Authority ("OPRA") allows for time stamps in nanoseconds and the other SIPs require time stamps in microseconds for equity trades and quotes, whereas the short sale transactional data released by exchanges contains time stamps in seconds.[441] Currently, OATS requires time stamps in milliseconds for firms that capture time in milliseconds, but does not require members to capture time in milliseconds.[442] EBS trade times are recorded only to the second; other EBS records must contain time stamps containing only the transaction date. The lack of uniform and granular time stamps can limit the ability of regulators to sequence events accurately and to link data with information from other data sources.

C. Linking and Combining Data

Sometimes one order or market activity event may be reflected in information contained in various data sources or in different fields within the same data source, and fully understanding that activity requires linking information across the different data sources. Therefore, regulators analyzing an event or running a surveillance pattern often need to link data. For example, cross-market examinations require the cumbersome and time-consuming task of linking many different data sources.[443] Regulators combine trading data from sources such as public feeds, SRO audit trails, EBS data, and trade blotters when reviewing surveillance alerts to determine whether violations of rules such as Rule 611 of Regulation NMS occurred[444] or to examine, for example, whether an entity availing itself of a market maker exemption is engaging in bona fide market making. In fact, the data needed for an examination often consist of many audit trails and are stored in non-uniform formats.[445] In addition, the analysis and reconstruction of market events could require linking many different data sources, such as a dozen SRO audit trails.

Regardless of whether order lifecycle reports are reflected in the same or different data sources, the process of linking lifecycle events is complex and can create inaccuracies. Merging different data sources often involves translating the data sources into the same format,[446] which can be a complex process that is prone to error. Linking records within or across data sources also requires the sources to share "key fields" that facilitate linkage, along with a successful linking algorithm. Regulators may be unable to link some data source combinations accurately because the data sources do not have key fields in common or the key fields are not sufficiently granular. For example, regulators cannot always link trade records accurately to EBS records. The EBS records contain a symbol and date, but the price and size on the records may reflect multiple trades spread over a period of time. Sometimes, different data sources may have key fields in common but the relationship between the fields is not straightforward. In these cases, the algorithm to link them may be necessarily complex and not entirely successful. Further, within a single order lifecycle, the order number may change when a broker-dealer routes the order to another broker-dealer or exchange or even to another desk at the same broker-dealer. The inability to link all records affects the accuracy of the resulting data and can force an inefficient manual linkage process that would delay the completion of the data collection and analysis portion of the examination, investigation, or reconstruction.

D. Customer and Broker-Dealer Identifiers

The data sources described in Section IV.D.2.a also lack consistent customer and broker-dealer identifiers, which limit regulators' ability to track the activity of one client or broker-dealer across the market. There is no standard convention for how broker-dealers identify customers.

Regulators face challenges in tracking broker-dealers' activities across markets due to inconsistent identifiers and a lack of a centralized database. These challenges occur primarily in the context of regulatory activities that require manual or ad hoc data analysis, as is often the case in particular investigations, examinations, and market studies. In the case of broker-dealers, SROs generally identify their members within their data using market participant identifiers ("MPIDs"). However, the MPIDs that identify broker-dealers on Execution Venues are not standardized across venues; consequently, a broker-dealer identified as "ABCD" on one venue may be identified differently on another venue, where "ABCD" may refer to a different broker-dealer entirely. Therefore, aggregating a broker-dealer's activity across venues requires verifying the MPIDs assigned to a broker-dealer on each venue, usually referencing the broker-dealer by its Central Registration Depository ("CRD") number.[447] In the course of manual data analysis, the Commission notes that its Staff have experienced challenges in identifying broker-dealers using CRD numbers. These challenges can be due to the fact that, although every broker-dealer has a CRD number, a broker-dealer that routes an order seldom, if ever, provides a CRD number to the broker-dealer that accepts the order.[448]

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[441] *See* OPRA Option Price Reporting Authority Binary Participant Interface Specification Version 1.7 (January 2015), *available at http://www.opradata.com/specs/opra_binary_part_spec.pdf*; *see also* NYSE, Modified Timestamps and Additional Timestamp Information for Daily TAQ (June 22, 2015), *available at http://www.nyxdata.com/nysedata/default.aspx?tabid=993&id=2784*; UTP Vendor Alert #2015–7, *supra* note 435, regarding additional time stamps to be reported to the SIP.

[442] *See* FINRA Rule 7440 (providing that "[e]ach required record of the time of an event shall be expressed in terms of hours, minutes, and seconds; provided that the time of an event shall be expressed in hours, minutes, seconds, and milliseconds if the member's system captures time in milliseconds."). The Commission approved the requirement that time be expressed in milliseconds if the member's system captures time in milliseconds on February 27, 2014. *See* Securities Exchange Act Release No. 71623 (February 27, 2014), 79 FR 12558 (March 5, 2014); *see also*, FINRA, Equity Trade Reporting and OATS, Regulatory Notice 14–21 (May 2014), *available at http://www.finra.org/sites/default/files/NoticeDocument/p506337.pdf.*

[443] Such linking is typically conducted electronically with an algorithm unless the size of the data set is small. This requires the person attempting to combine and link the data to write computer code to identify and match the records that need to be linked. This task involves extensive testing and debugging the first time that person tries to combine and link those specific data sources. Further, given the variation in formats across broker-dealers and other data sources, the code may need to change for each investigation, requiring a repeat of the extensive testing and debugging process.

[444] 17 CFR 242.611.

[445] In the context of the CAT NMS Plan, the Commission does not distinguish data format from data taxonomy. *See* Section III.B.3, *supra.* In discussing data format, the Commission combines data format with data taxonomy. *Id.* The distinction between format and taxonomy is not significant in the context of the CAT NMS Plan because the Plan does not specify either for incoming data and the Plan effectively requires uniformity in both for regulator access. *Id.* SRO audit trails currently differ in both format and taxonomy as do many other trading and order data sources.

[446] For example, different data sources can format dates and times differently or may use different notations to signify that the field contains no value.

[447] The CRD is an automated database operated by FINRA that stores and maintains information on broker-dealers and their registered persons relating to their licensing, registration, complaints, professional background, and disciplinary history. Each broker-dealer and their registered persons are assigned a CRD number for identification.

[448] The Commission and the SROs have generally overcome these challenges in the context of automated regulatory data analysis, and found ways to reduce these challenges in some manual data

Regulators sometimes find it necessary to analyze trading activity at the customer level instead of the broker-dealer level. Consistently identifying customer account owners across the multiple broker-dealers with whom they transact is difficult and prone to error. Although, for example, the EBS system provides the names associated with each account traded, these names are drawn from the separate records of each broker-dealer providing data to the EBS system, and the same party may be identified by a different name across multiple broker-dealers. Further, the lack of tax identification numbers in many EBS records limits the ability for regulators to trace the trading activity of customers across broker-dealers. Tax identification numbers are not required to be reported in EBS for average price, allocation, riskless principal, foreign accounts, and subaccounts. In fact, when one broker-dealer executes for a second broker-dealer, the tax identification number is that of the second broker-dealer regardless of whether the second broker-dealer is trading for a customer.

E. Aggregation

The practice used in some data records of bundling together data from different orders and trades also can make it difficult to distinguish the different orders and trades in a given bundle. As an example, brokers frequently utilize average-price accounts to execute and aggregate multiple trades for one or more customers. In these cases, for example with EBS data, the system does not reflect the details of each individual trade execution, because it reports only the average aggregate prices and volumes of the various trades within a series that have been bundled together for reporting purposes. Further, information on trade allocations aggregate the trade information to such an extent that it is difficult for regulators to identify when particular clients may be afforded preferential treatment because it is challenging to link subaccount allocations to orders and trades.

Equity and options cleared reports provide valuable data to regulators, but aggregation reduces their usefulness, because the reports do not have detailed trade information and do not include activity that does not require clearing.[449] The volume in these reports cannot be fully disaggregated and reconciled with the equity trade execution volume from other data sources used by the Commission, *e.g.*, TAQ and MIDAS, because the volume in the cleared reports is not necessarily a summation of all trades. For example, the same trade can be reported two or more times, by both the buy and the sell sides, for some OTC transactions and for all trades in NASDAQ exchanges.[450] Similarly, option cleared reports bundle together multiple executions by compressing or netting them to facilitate clearing. This aggregation limits regulators' ability to link records across data sources, as well as limiting the accuracy with which the data source reflects market events, which is particularly problematic in applications that require market reconstruction.

Finally, issuer repurchase information is aggregated at the monthly and quarterly level.[451] This aggregation limits the use of such data in investigations of the timing of issuer repurchases and issuer stock price manipulation and in analysis of the use of the Rule 10b–18 issuer repurchase safe harbor.[452]

(3) Accessibility

The SROs and Commission also lack direct access—meaning the ability to log into a system in a manner that would allow them to gather and analyze the data they need—to many of the data sources described above. SROs generally have direct access only to their own audit trails and the public data feeds.[453] While SROs control the manner in which they access their own data, their investigations in some cases require access to the data of other SROs because firms could trade across multiple SROs. To access another SRO's data, SROs must send requests to the other SROs[454] or to the ISG.[455] SROs needing information not included in their audit trails or the audit trail of another SRO must request such information from their members. The SROs might not be able to acquire data from entities that are not members of that SRO; non-members are not obligated to provide SROs with data,[456] any data provided by

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analysis and can efficiently track broker-dealers across venues. The Commission understands that FINRA can track broker-dealers across venues pursuant to its responsibilities under a plan for allocating regulatory responsibilities pursuant to Rule 17d–2. On September 12, 2008, the Commission declared effective a plan for allocating regulatory responsibilities pursuant to Rule 17d–2 filed by the American Stock Exchange, LLC, Boston Stock Exchange, Inc., CBOE Stock Exchange, LLC, CHX, FINRA, ISE, NASDAQ, NSX, NYSE, NYSE Arca, NYSE Regulation, Inc., and Philadelphia Stock Exchange, Inc. (the "Participating Organizations," which have since been updated to be the following SROs: BATS, BYX, CBOE, CHX, EDGA, EDGX, FINRA, NASDAQ OMX BX, NASDAQ OMX PHLX, NASDAQ, NSX, NYSE, NYSE MKT [f/k/a NYSE Amex], and NYSE Arca) ("Insider Trading Rule 17d–2 Plan"). The Insider Trading Rule 17d–2 Plan allocates regulatory responsibility over common FINRA members (members of FINRA and at least one of the Participating Organizations) (collectively "Common FINRA Members") for the surveillance, investigation, and enforcement of (i) Federal securities laws and rules promulgated by the Commission pertaining to insider trading, and (ii) the rules of the Participating Organizations that are related to insider trading ("common insider trading rules"). Under that Plan, the Participating Organizations, other than FINRA, have been relieved of regulatory responsibility over Common FINRA Members (*i.e.*, the broker-dealer and its associated persons) for surveillance, investigation, and enforcement of the common insider trading rules over such persons with respect to "Listed Stocks" (as defined in that Plan). Accordingly, FINRA retains regulatory responsibility for Common FINRA Members with respect to the common insider trading rules—irrespective of the market(s) on which the relevant trading may occur. Separately, FINRA performs investigations and enforcement with respect to non-Common FINRA Members pursuant to a regulatory services agreement between FINRA and several of the other Participating Organizations. *See* Securities Exchange Act Release No. 58536 (September 12, 2008), 73 FR 54646 (September 22, 2008); *see also* Securities Exchange Act Release Nos. 58806 (October 17, 2008), 73 FR 63216 (October 23, 2008); 61919 (April 15, 2010), 75 FR 21051 (April 22, 2010); 63103 (October 14, 2010), 75 FR 64755 (October 20, 2010); 63750 (January 21, 2011), 76 FR 4948 (January 27, 2011); and 65991 (December 16, 2011), 76 FR 79714 (December 22, 2011).

[449] The option cleared volume from the OCC contains the clearing firm, number of customer contracts, and number of firm contracts for the options.

[450] This scenario of a trade being reported several times is generally the result of agreements that permit a broker-dealer to clear trades on behalf of another broker-dealer and send trades directly to the NSCC. Broker-dealers often enter into these agreements to simplify their clearing processes, achieve lower transaction costs, and take advantage of extended hours of service.

[451] Issuers report quarterly and monthly repurchases pursuant to Item 703 of Regulation S–K. This data includes all issuer repurchases, including tender offers and open market repurchases, but does not distinguish the type of repurchase. The Commission notes that Item 703 provides, in part, that issuers must disclose "the number of shares purchased other than through a publicly announced plan or program and the nature of the transaction (*e.g.*, whether the purchases were made in open-market transactions, tender offers, in satisfaction of the company's obligations upon exercise of outstanding put options issued by the company, or other transactions." *See* 17 CFR 229.703.

[452] Rule 10b–18 provides issuers with a "safe harbor" from liability for manipulation under Section 9(a)(2) of the Act, 15 U.S.C. 78i(2), and Rule 10b–5 thereunder, 17 CFR 240.10b–5, solely by reason of the manner, timing, price, and volume of their repurchases when they repurchase common stock in the market in accordance with the Section's manner, timing price, and volume conditions. *See* 17 CFR 240.10b–18.

[453] FINRA does receive data from certain SROs on a daily basis and subsequently has direct access to that data.

[454] Commission staff understands that SROs receiving information requests from other SROs will typically provide the information, although they are not required to do so.

[455] *See supra* note 399.

[456] *See, e.g.*, NYSE Rule 2.A.xvi.—Jurisdiction (noting that the exchange has jurisdiction over matters related to non-member broker-dealers that choose to be regulated by the exchange). The Commission may, by rule or order, subject non-

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the regulator of the non-member firm would be on a voluntary basis, or pursuant to the terms of the ISG Agreement.

The Commission has direct access only to the public data feeds and the equity and option cleared data; it lacks direct access to information provided in EBS or contained in trade blotters, order tickets, order handling data, SRO audit trails, and OATS data. Unlike the SROs, the Commission can subpoena data from entities that are not registered with the Commission, such as professional traders that are neither broker-dealers nor investment advisers.

If a regulator does not have direct access to data it needs, the regulator would request it. This can result in many data requests to broker-dealers, SROs, and others,[457] which are burdensome to fill. The Commission recognizes that data requests could impose burdens on the entities responding to the request, in addition to the burden on the regulators to put the request together. Broker-dealers, investment advisers, and SROs responding to a data request must incur costs in order to produce, store, and transmit the data for the Commission or SRO.[458] Further, as indicated above, regulators may need to request the data needed from many different data providers because of fragmentation in the data, and thus one analysis, such as an investigation, can generate many data requests.

Fragmentation in trade and order data can take many forms. First, an analysis may require the same type of data from many market participants. Second, the required data fields for an analysis may be reflected in different types of data. Finally, an analysis may require data on different products covered in separate data sources. The fragmentation in the data across market participants is a function of the fragmentation of trading and broker-dealer services. In today's equity markets, trades execute across 12 exchanges, more than 40 ATSs, and around 250 dealers.[459] With its RSAs, FINRA can consolidate much of the SRO audit trails in equities.[460] In the options markets, 14 different exchanges trade listed options with no off-exchange trading of standardized options and no entity aggregating each audit trail into one dataset. The vast majority of stocks trade in more than one location and most options trade on multiple exchanges.

Exchange SROs generally limit their data collection to securities traded on their own exchanges, and limit the scope of their audit trails to transactions occurring on their exchanges. While ATSs and dealers report order events in equities to OATS, each of the 12 equities exchanges has its own audit trail. As a result of this structure, a market reconstruction for a single security may involve data requests to multiple exchanges. Likewise, a project involving options data may require data from each of the 14 options exchanges.

To acquire broker-dealer order records, EBS, trade blotters, and order tickets, regulators need to send a request to each broker-dealer to obtain its data. In the Commission's experience requested data can suffer from missing variables, truncations, and formatting problems due to the way that the data is queried by the broker-dealer. These problems can lead to substantial delays in using data and loss in regulatory productivity. Many different broker-dealers could have trading records in a given security on a given day of interest, so one narrow investigation could generate many data requests. As a result, in 2014 the Commission made 3,722 EBS requests that generated 194,696 letters to broker-dealers for EBS data. Likewise, the Commission understands that FINRA requests further generate about half this number of letters. In addition, for examinations of investment advisers and investment companies, the Commission makes approximately 1,200 data requests per year. Further, an investigation that requires tracing a single trade or a set of trades back to an investor or investors can generate many data requests. For such investigations, regulators would first need to request data from the exchanges or market participants executing the trades. This data would tell the regulators which members, subscribers, or broker-dealers sent the orders that led to the executions. Regulators would then need to go to the members, subscribers, and broker-dealers to get information on the orders and repeat until they get to the broker-dealer who initiated the order to see the customer behind the order.

Finally, some regulatory activities require data on both equities and options. Because current data sources do not contain information regarding both equities and options, regulators needing data on both types of securities would need to make several data requests. Closely related securities are sometimes traded on entirely different exchanges, complicating cross-product analyses. For example, COATS data covers options trades but excludes the trading of the underlying assets. Often investigations or analyses require examining both options and their underlying assets, creating the need for regulators to request data from multiple sources.

This data fragmentation also results in disparate requirements for industry members to record and report the same information in multiple formats. Because each SRO has its own data requirements, a market participant that is a member of multiple SROs may be required to report audit trail data in numerous formats and interact with multiple regulators in response to normal data queries. That said, the Commission understands that the number of disparate formats faced by each member may have reduced over the past several years.[461]

(4) Timeliness

In order to respond promptly to market events, regulators must be able to obtain and analyze relevant data in a timely fashion. Currently, obtaining trade and order data and converting the

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members to the rules of national securities exchanges if it deems it necessary or appropriate in the public interest and for the protection of investors, to maintain fair and orderly markets, or to assure equal regulation. Section 6(f)(2) of the Act, 15 U.S.C. 78f(f)(2); *see also* Sections 6(b)(1), 15A(b)(2) of the Act, 15 U.S.C. 78f(b)(1), 78o–3(b)(2) (requiring national securities exchanges and securities associations, respectively, to have the capability to enforce compliance by their members with applicable Exchange Act requirements and exchange or association rules).

[457] In the context of an investigation or a court, in litigation, the Commission can request or subpoena information from entities, including those not registered with the Commission. *See* SEC Rule of Practice 232. Pursuant to their rules, SROs can request information from their registered entities; *see also supra* notes 454–456 and accompanying text (discussing how SROs request information from other parties, including other SROs).

[458] *See, e.g.,* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(B) (discussing the current process for broker-dealers and SROs to respond to data requests, and stating that broker-dealers must commit staff to respond to requests for EBS or large trader data and may take varied approaches to fulfilling their regulatory reporting obligations).

[459] *See* Securities Exchange Act Release No. 76474 at 81008, 81112, "Regulation of NMS Stocks" (November 2015), *available at http://www.sec.gov/rules/proposed/2015/34-76474.pdf*; *see also* Laura Tuttle, OTC Trading: Description of Non-ATS OTC Trading in National Market System Stocks (March 2014), *available at http://www.sec.gov/dera/staff-papers/white-papers/otc-trading-white-paper-03-2014.pdf.*

[460] FINRA has access to data from OATS and each equities exchange except CHX. *See supra* note 333 and accompanying text. This reduces the data fragmentation as it relates to the number of data requests for equities.

[461] For example, some exchange audit trails require floor brokers who operated on their own systems to submit order records to the exchange. These same floor brokers could be members of other SROs that require different formats for submitting order reports. The Commission understands that the volume of trading conducted on an exchange but not on the exchange's systems has declined sharply. Therefore, the activity generating the disparate reporting requirements has declined.

data into a form in which they can be analyzed can involve a significant delay from the time of a particular event of interest. Indeed, in some cases the length of time from when an event occurs until regulators can use relevant data in an investigation or analysis can be weeks or months. This is especially true for trading data that includes customer information.

Some of the data sources described above can be accessed by SROs and the Commission without significant delay. For example, SROs and the Commission have some real-time direct access to public data and, through MIDAS, the Commission has next-day direct access to analytics that are based on public data, such as volumes over various time horizons. Regulators can also sometimes request and receive trade blotter data on the same day as the trade(s) of interest because trade blotters are generally stored in systems immediately.[462] Further, the Commission understands that FINRA receives audit trail data from exchanges pursuant to RSAs at the end of each trading day. However, it has been the Commission's experience that trade blotter data requests can take weeks or in excess of a month depending on the scope of the request and how accustomed the broker-dealer is with fulfilling such requests.

Corrected FINRA OATS data may be available less than two weeks after an event and uncorrected data on day T+1. In particular, FINRA members submit OATS data on a daily basis, submitting end-of-day files by 8:00 a.m. Eastern Time the following day or they are marked late by FINRA.[463] FINRA acknowledges receipt of the data an hour after the member submits it, before running its validation process. FINRA then takes approximately four hours after acknowledging receipt of OATS data to determine if the data contain any syntax errors.[464] In addition to the four hours needed to identify errors within a report, it takes another 24 hours for context checking, which identifies duplicates or secondary events without an originating event. Once a context rejection is available, the member has up to five business days to repair the rejection.[465] Reports for files that contain internally inconsistent information about processing, linking, and routing orders may be available within two business days. FINRA attempts to match the inconsistent information against any additional data received up to day T+2 for linking errors and day T+30 for routing errors. The timing for surveillance programs varies depending on the type of surveillance being performed; data is assumed to be completely processed and corrected at day T+8.[466]

Because market participants generally do not report or compile datasets immediately after an order event, there is a delay before regulators may access some data sources. For example, the compilation of equity and option cleared reports occurs on day T+1 for options and day T+3 for equities (*i.e.*, the clearing day) and the electronic query access for equities is available from SIAC on day T+3. Additionally, when broker-dealers receive a request for EBS, the firm must first fill in the EBS report and then, if it does not self-clear, pass the reports on to its clearing firm to compile and send to SIAC. The EBS submission process can take up to ten business days. More immediate requests for cleared options data can be submitted to FINRA, but even this process takes up to two days. Because EBS data do not contain order entry time and order execution time, regulators must obtain this information from firms and brokers using either data requests or subpoenas, and this process generally can take from two to four weeks depending on the size of the request.

As discussed above,[467] the lack of direct access to most data sources may further delay the ability of regulators to use data in certain cases. When regulators have direct access to a data source, the time needed to receive data is only the time it takes for a query to run. For example, depending on the scope of the search, it can take just a few minutes to return the results of a query of equity and option clearing data.[468] As a result of direct access to their own audit trails, some SRO surveillance occurs on the same day as the trading activity. FINRA, however, typically gets direct access to exchange data, uncorrected OATS data, and corrected OATS data at the time it receives it, unlike the exchanges and broker-dealers that have some access to the data as it is generated.[469] However, when regulators lack direct access, their data requests can consume significant time, including both the time required to put the request together and response times from the SROs, broker-dealers, and others producing the data.[470] For example, obtaining complete responses from each broker-dealer for an EBS request can take days or weeks depending on the scope of the request. Likewise, responses from the ISG for SRO audit trail data can take days or weeks.

Once regulators receive requested data, the data often have to be processed into a form in which they can be analyzed. As discussed above,[471] it can take considerable time for regulators to combine data from different sources and link records from within or across data sources. Furthermore, the lack of consistency in format adds complexity to projects involving data from multiple data sources, even when the project does not involve linking of these different data.[472] For example, the

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[462] The regulated entities that respond to data requests need to query data to respond to the request while still maintaining normal operations. Large data requests can take significant computing time and thus, may require the respondents to time the queries to minimize disruptions. Further, respondents need to write code to execute the query. More experienced respondents would have existing code that they could modify without significant debugging whereas less experienced respondents would need to take time to code and debug their queries.

[463] FINRA currently receives exchange data from most SROs at the end of the trading day. Information on broker-dealer data reporting timeframes is available at OATS Reporting Technical Specifications, *supra* note 357, at 8–1; *see also* Adopting Release, *supra* note 9, at 45768 n.504.

[464] *See* Section IV.D.2.b(2)A, *supra* (providing more detail on the validation and error checking process for OATS and other data sources).

[465] *See* OATS Reporting Technical Specifications, *supra* note 357, at 6–3. Other types of errors and corrections adhere to slightly different time-lines. *See, e.g., id.* at 6–12.

[466] FINRA has the capability to query data that is not fully corrected, processed and linked to investigate market activity at T+1.

[467] *See* Section IV.D.2.b(3), *supra*.

[468] MIDAS, one example of a direct access data source, queries return data in seconds for single ticker, intraday queries and within hours for complex multi-ticker, multi-day queries. The data response times from MIDAS vary depending on the format of the resulting data and the number of other users on the system. A query that pulls all message traffic in an equity on a single day would take around thirty minutes.

[469] FINRA typically collects exchange data at the end of the trading day and, as noted above, OATS on T+1. FINRA can begin to access each data source, but, as discussed below, FINRA has direct access to combined data only after the completion of the OATS error process and the processing necessary to reformat and merge the data sources.

[470] As discussed above, because analysis of some events requires the collection of data from numerous sources, the time to request and receive data may be significant. The more fragmented the necessary data is, the longer it would take regulators to put together the data request. Putting together an EBS request, for example, could involve first identifying to which broker-dealers to send the requests and then manually creating a request letter for each broker-dealer. The Commission does recognize, however, that regulators can request and receive trade blotter data on the same day as the trade event if the request is for a small amount of data from an experienced provider. In fact, two years of trade blotter data from an experienced investment adviser can take several days while two years of data from clearing firms can take six weeks to several months.

[471] *See* Section IV.D.2.b(2)C, *supra*.

[472] Because no single data source is complete, regulators often need to combine data across

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Commission understands that FINRA takes approximately three days to process exchange data to transform it into a common format and prepare it for surveillance. Therefore, FINRA cross-market surveillances and surveillance of the off-exchange market typically assumes data is fully corrected and processed on T+8.[473] Any processing that requires linking order life-cycle events or other types of data can be time consuming to perform, even if all of the data comes from the same data source.[474] In some cases, the laborious process of assembling the data delays other critical investigative or analytical steps.

In addition, those who use regulatory data also typically take time to ensure the accuracy of the data. When regulators question the accuracy of data, they often check several alternative sources until they are comfortable that their data are accurate. This checking of data accuracy and augmentation process adds time to an investigation or analysis. In some cases, regulators may filter out unreliable data or refocus an investigation to avoid relying on data after spending time and resources unsuccessfully attempting to ensure accuracy.

As discussed in the Adopting Release, the timely accessibility of data to regulators also impacts the efficacy of detecting (and possibly mitigating the effects of) some types of market manipulation.[475] For example, some pernicious trading schemes are designed to generate large "quick-hit" profits in which market participants attempt to transfer the proceeds from the activity to accounts outside of the reach of domestic law enforcement as soon as the offending transactions have settled in the brokerage account (typically three days after execution). The timeframes currently required to acquire data generally complicate the prevention of these asset transfers.

3. Request for Comment on the Baseline

The Commission requests comment on all aspects of the Baseline for the economic analysis of the CAT NMS Plan. In particular, the Commission seeks responses to the following questions:

240. Do Commenters agree with the Commission's assessment of the Baseline for the economic effects of the CAT NMS Plan? Why or why not?

241. Do Commenters believe that the Baseline appropriately describes current market surveillance, examination, and investigation activities by regulators? Why or why not?

242. Do Commenters believe that the Baseline appropriately describes current market event analysis and reconstruction activities by regulators? Why or why not?

243. Do Commenters believe that the Baseline appropriately describes market analysis activities by regulators? Why or why not?

244. Do Commenters believe that the Baseline appropriately describes the sources of trade and order data currently available to regulators? Why or why not?

245. Are there additional sources of trade and order data currently available to regulators? Please explain and describe those sources in detail, including any limitations.

246. Do Commenters agree with the Commission's assessment of the completeness of the trade and order data currently available to regulators? Why or why not? Does the fragmented nature of current data sources pose significant challenges to regulators seeking complete data?

247. Do Commenters agree with the Commission's assessment of the accuracy of the trade and order data currently available to regulators? Why or why not?

248. Do Commenters agree that the error rates in current data sources or in responses to ad hoc data requests pose significant challenges to regulators? Why or why not? Do Commenters have additional statistics on error rates in these data?

249. Do Commenters agree with the Commission's assessment of the Baseline of clock synchronization for broker-dealers, exchanges, and others in the securities industry? Please explain. Does the Commission's analysis appropriately describe the frequency of orders that regulators may need to sequence and the challenges to sequencing given current clock synchronization standards? If not, do Commenters have more appropriate analyses? How could the Commission improve the analysis? Please explain.

250. Do Commenters believe that the Baseline appropriately describes granularity of time stamps in the trade and order data currently available to regulators? Please explain.

251. Do Commenters agree with the Commission's assessment of regulators' ability to combine or link data across the sources of trade and order data currently available to regulators? Please explain.

252. Do Commenters believe that the Baseline appropriately describes customer and broker-dealer identifiers in the sources of trade and order data currently available to regulators? Please explain.

253. Do Commenters believe that the Baseline appropriately describes aggregation within the sources of trade and order data currently available to regulators? Please explain.

254. Do Commenters agree with the Commission's assessment of the current ability of regulators to access trade and order data? Why or why not?

255. Do Commenters agree with the Commission's assessment of the timeliness of the trade and order data currently available to regulators? Why or why not?

256. Is there any other information that the Commission should include in the Baseline? Please explain.

E. Benefits

As noted in the Framework Section above, the economic benefits of the CAT NMS Plan would come from any expanded or more efficient regulatory activities facilitated by improvements to the data regulators use because the Plan would create a new consolidated data source, CAT Data that could replace the use of some current data sources for many regulatory activities. Therefore, the Benefits Section first describes how CAT Data compares to data regulators currently use for regulatory activities. Then this Section describes how the CAT Data would improve regulatory

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sources to get a full picture. For example, regulators may need to compile SRO audit trail records from multiple SROs. Not all SROs collect data using the OATS format. The different data formats implemented by SROs thus involve a significant investment of staff time to reconcile. In addition, each options exchange maintains its own COATS audit trail in a different format and includes different supplemental data items in its audit trail. These differences make it difficult and labor intensive for regulators to view options trading activity across multiple markets.

[473] FINRA can access data as soon as T+1 when necessary.

[474] The first step in linking involves finding a key to link the records. The key can be one field or a series of fields in the data. The second step involves designing an algorithm to use the key to link records. If each data source formats or stores the fields in the key differently, the algorithm can be complex. Even within a single data source, the creation of the algorithm may be complicated because the fields needed to build the key can change with each market participant. For example, each member can report a different order ID for the same order, and this order ID may even change within the same member. The algorithm for linking needs to recognize how order IDs change and use additional information in the order records to piece an order lifecycle together. As noted above in Section IV.D.2.b(2)C, linking algorithms have varying rates of success and significant error rates in event linking are common. The lack of success could be due to the lack of a cross-participant error resolution process, the complexity in the linkage, or otherwise missing key information needed for linkage. As a result, regulators may invest significant time and resources into linking data only to achieve a success rate significantly less than 100%. Linking across multiple data sources makes linking even more time consuming.

[475] *See* Adopting Release, *supra* note 9, at 45731.

activities and how these improvements benefit investors.

The Commission preliminarily believes that the CAT NMS Plan would produce data that would improve on current data sources, because CAT Data would result in regulators having direct access to consolidated audit trail data that would improve many of the regulatory activities discussed in the Baseline Section. As summarized in Table 4, if the Plan is approved, the Commission preliminarily believes that the Plan would generate improvements in the quality of data that regulators would have access to in the areas of completeness, accuracy, accessibility, and timeliness. The Commission preliminarily believes that the improvements in the quality of regulatory data within these categories would significantly improve the ability of regulators to perform a wide range of regulatory activities, which would lead to benefits for investors and markets. In addition, the Commission preliminarily believes that certain provisions in the Plan related to future upgrades of the Central Repository, the promotion of the accuracy of CAT Data, the promotion of the timeliness of CAT Data, and the inclusion of specific governance provisions identified by the Commission in the Adopting Release for Rule 613, increase the likelihood that the potential benefits of the CAT NMS Plan described below would be realized.

In the category of completeness, the ability for regulators to access more material data elements from a consolidated source would enable regulators to more efficiently carry out investigations, examinations, and analyses because regulators could acquire from a single source data that they would otherwise need to compile from many data sources. This data source would include data elements that regulators currently acquire with difficulty (if at all), including customer information, allocation records, open/close position information for equities, and certain other trade and order information not consistently available in SRO audit trails.[476]

In the category of accuracy, the Commission preliminarily believes that the Plan would substantially improve data accuracy by requiring CAT Data to be collected, compiled, and stored in a uniform linked format using consistent identifiers for customers and market participants. These requirements should over time result in fewer inaccuracies in the data as well as fewer inaccuracies introduced in combining data compared to the current data regime.[477] The CAT NMS Plan would also require that CAT Reporters' business clocks be synchronized to within 50 milliseconds of the time maintained by the NIST, which would increase the precision of the time stamps provided by the 39% of broker-dealers who currently synchronize their clocks with less precision than what is called for by the Plan. This information may also be used to partially sequence surrounding events. However, while the Commission preliminarily believes that the requirements in the Plan for clock synchronization and time stamp granularity would improve the accuracy of data with respect to the sequencing of market events, the improvements would be modest, as regulators' would experience improvement for a small percentage of market events relative to all surrounding events.[478] Independent of the potential time clock synchronization benefits, the order linking data that would be captured in CAT should increase the proportion of events that could be sequenced accurately. This reflects the fact that some records pertaining to the same order could be sequenced by their placement in an order lifecycle (*e.g.*, an order submission must have occurred before its execution) without relying on time stamps.

In the category of accessibility, the Commission preliminarily believes that the Plan would substantially improve the access of data for regulators due to the Plan's requirement for regulators to have direct access to CAT Data. While some elements of CAT Data can currently be obtained from other sources, it can take regulators weeks or months to obtain this data. As opposed to the current state of fragmented data with indirect regulatory access, if the CAT NMS Plan is approved, regulators would have direct access to consolidated trade and order data from a single source. Therefore, instead of requesting data from multiple sources, the Plan would allow regulators to log into a single system and query data directly from the system. This direct access for regulators would dramatically reduce the hundreds of thousands of requests that regulators must make each year in order to obtain data, thus reducing the burden on the industry.

In the category of timeliness, the Commission preliminarily believes that the Plan would significantly improve the timeliness of data acquisition and use, which could improve the timeliness of regulatory actions that use data. CAT Data would be reported by 8:00 a.m. Eastern Time on day T+1 and made available to regulators in raw form after it is received and passes basic formatting validations,[479] with an error correction and linkage process that would be completed by 8:00 a.m. Eastern Time on day T+5.[480] These requirements would ensure that data is available to regulators faster than in the current system and should also reduce the amount of time regulators would need to process data prior to usage.

Regulatory activities expected to benefit from improved data quality would include surveillance, investigations, examinations, analysis and reconstruction of market events, and analysis in support of rulemaking initiatives. Data is essential to all of these regulatory activities and therefore substantial improvements in the quality of the regulatory data should result in substantial improvements in the efficiency and effectiveness of these regulatory activities, which should translate into benefits to investors and markets. For example, improved data could lead to more effective and efficient surveillance that better protects investors and markets from violative behavior and facilitates more efficient and effective risk-based investigations and examinations that more effectively protect investors. Together, these improved activities could better deter violative behavior of market participants, which could improve market efficiency. Furthermore, this increase in directly accessible data should improve regulators' understanding of the markets, leading to more informed public policy decisions that better address market deficiencies to the benefit of investors and markets.

The Commission notes that the Plan lacks information regarding the details of certain elements of the Plan, primarily because many details likely to affect the benefits of the Plan have not yet been determined, which creates some uncertainty about the expected economic effects. As discussed further below, lack of specificity surrounding the processes for converting data formats and linking related order events creates uncertainty in the anticipated improvements in accuracy because such processes have the potential to create new data inaccuracies. Lack of specificity surrounding the process for regulators to access the CAT Data also creates uncertainty around the expected improvements in accessibility. For example, while the Plan indicates that regulators would have an on-line targeted query tool and a tool for user-defined direct queries or bulk extraction,[481] the Plan itself does not provide an indication for how user-friendly the tools would be or the particular skill set needed to use the tools for user-defined direct queries.

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[476] *See* CAT NMS Plan *supra* note 3, at Sections 1.1, 6.3 and 6.4; *see also* 17 CFR 242.613(c)(7).

[477] The Commission recognizes that the high initial Error Rate tolerance of the CAT NMS Plan could reduce the accuracy of raw CAT Data relative to current data sources. However, as stated in the Plan "the Participants expect that error rates after reprocessing of error corrections will be *de minimis.*" *See* CAT NMS Plan *supra* note 3, at Appendix C, Section 3(b), n.102.

[478] *See* FIF Clock Offset Survey, *supra* note 127.

[479] While the Plan does not specify exactly when these validations would be complete, the requirement to link records by 12:00 p.m. Eastern Time on day T+1 gives a practical upper bound on this timeline.

[480] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.2(a).

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[481] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Sections 8.1, 8.2.

Table 4

	Customer Identifier	Broker-Dealer Identifier	Time Stamp[482]	Allocation information	Order Display Information	Buy-to-Cover Indicator	Special Handling Instructions	Routing/ Modification/ Cancellation information	Entire Lifecycle	Direct Access for Regulators	Off-Exchange Activity[483]	Timeliness of Data Compiling[484]
OATS	No	Yes	Yes (majority in milliseconds but some in seconds)	No	Yes (for limit orders)	No	Yes (conditional)	Yes	Yes (before order reaches exchange) No (once order reaches exchange)	No (except FINRA). Access can take several weeks	Yes	Raw Data: T+1 Corrected Data: T+5
COATS	No	Yes	Yes	No	No	No	No	Yes	No	No (except SROs w/r/t their own members)	No	Reported same-day, but separate file transmitted at latest T+1
SRO Audit Trails	No	Yes	Yes (majority in milliseconds but some in seconds)	No	No	No	No	Yes	No (only once order reaches exchange)	No (except SROs w/r/t their own trails). Access can take several weeks	No	As soon as a trade is executed.
Equity and Option Cleared Reports	No	No	No	No	No	No	No	No	No	Yes	Yes	Equity: T+3 Option: T+1
Electronic Blue Sheets	Yes (but not always consistent across broker-dealers)[485]	Yes (but not always consistent across broker-dealers)	Yes	No	No	No	No	No (except for certain cancellation information)	No	No. Access can take several weeks or months	Yes	10 business days after request is submitted
Trade Blotters/Order Tickets	Yes (but not always consistent across broker-dealers)	Yes (but not always consistent across broker-dealers)	Yes (can be requested, although not always reliable)	No	No	No	No	No	No	No. Access can take several days	Yes	Same-day
Trading and Order Handling System Data	Depends on the trader	Yes	Yes	No	No	No	No	Yes	Yes (except allocations)	No. Regulators must request this data (SEC asks for the data within 10 days)	Yes	Same-day
Public/ Proprietary Data	No	No	Yes (varied between seconds and microseconds)	No	No	No	No	Yes (except non-displayed orders)	No	Yes	Yes	Same-day
Data from Proposed CAT	Yes (613(c)(7)(i)(A))	Yes (613(c)(7)(i)(C))	Yes (milliseconds) (613(c))	Yes (613(c)(7)(vi))	Yes (613(c)(7)(i)(E))	Yes (613(c)(7)(i)(E))	Yes (613(c)(7)(i)(E))	Yes (613((c)(7)(ii))	Yes (613(j)(9))	Yes (SEC and SROs) (613(e)(2))	Yes (613(e)(2) and (3))	Raw Data: T+1 Corrected Data: T+3

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[482] The CAT NMS Plan also requires CAT Reporters to synchronize their time clocks to the time maintained by the NIST with an allowable drift of 50 milliseconds. See CAT NMS Plan, supra note 3, at Section 6.8. According to a survey conducted by the Financial Information Forum (FIF), 39% of responding broker-dealers currently synchronize their clocks with less precision than what is called for by the CAT NMS Plan. Thus, the CAT NMS Plan would also increase the accuracy of the time stamps used by certain broker-dealers. See supra note 127.

[483] Off-exchange activity includes currently reportable events that are not handled by a registered securities exchange.

[484] In this instance, "timeliness" refers to when the data are compiled at the source in question (e.g., when OATS receives data from reporting broker-dealers), not when they become available to regulators because that timeline can vary depending on the regulator in question. As shown in the "Direct Access for Regulators" column, it may still take several days, weeks, or months for regulators to be able to access the data. For example, while OATS reporters provide the data at T+1, the SEC must request OATS data in order to access it, which may take several days or weeks. This narrower definition of timeliness is not used throughout this economic analysis.

[485] Guidance from FINRA indicates that broker-dealers must "identify the party to the trade" through EBS fields such as "Primary Party Identifier," but that party may be another broker-dealer rather than the ultimate customer. See FINRA, Electronic Blue Sheet Submissions, FINRA and ISG Extend Effective Date for Certain Electronic Blue Sheet Data Elements, Regulatory Notice 12-47 (Oct. 2012), available at https://www.finra.org/sites/default/files/NoticeDocument/p194655.pdf. Similarly, under the large trader rule, persons exercising "investment discretion" are reported through EBS, but in some cases such persons are investment advisers rather than their customers. See supra note 372 and accompanying text (discussing the large trader rule).

1. Improvements in Data Qualities

As explained above, in the Adopting Release the Commission identified four qualities of trade and order data that impact the effectiveness of core SRO and Commission regulatory efforts: Accuracy, completeness, accessibility, and timeliness.[486] In assessing the potential benefits of the CAT NMS Plan, the Commission's economic analysis compares the data that would be available under the Plan to the trading and order data currently available to regulators.[487] As explained in detail below, the Commission preliminarily believes that the Plan would improve data in terms of all four qualities noted above, although uncertainty remains as to the expected degree of improvement in some areas.

a. Completeness

The CAT NMS Plan, if approved, would result in regulators having direct access to a single data source that would be more complete than any current data source.[488] The CAT Data would be more complete than other data sources because it would contain data from a greater number of broker-dealers on more event types, products, and data fields, when compared to existing SRO audit trails and other data sources. As discussed in more detail below, while some current data sources contain many of the elements that would be included in CAT Data, the CAT Data would consolidate that data into one source to produce a data source much more complete than any existing source. CAT Data would also include some elements that are not available from any current data source. Having this data consolidated in a single source would provide numerous benefits that are described below.

(1) Events and Products

CAT Data would be more complete than any current data source because it combines currently fragmented information into one data source. In particular, the Plan states that the Central Repository, under the Plan Processor's oversight, shall receive, consolidate, and retain all CAT Data.[489] "CAT Data" is defined as "data derived from Participant Data, Industry Member Data, SIP Data, and such other data as the Operating Committee may designate as CAT Data from time to time."[490] Section 6.3 of the Plan describes the data to be received from Participants that are national securities exchanges, which would include data for "each NMS Security[491] registered or listed for trading on such exchange or admitted to unlisted trading privileges on such exchange." Participants that are a national securities association (*i.e.*, FINRA) must report data for each "Eligible Security for which transaction reports are required to be submitted to that association."[492] "Eligible Security" is defined in the Plan as all NMS Securities and all OTC Equity Securities,[493] and "OTC Equity Security" is defined as "any equity security, other than an NMS Security, subject to prompt last sale reporting rules of a registered national securities association and reported to one of such association's equity trade reporting facilities."[494] "Industry Member Data" refers to audit trail data reported by members of the exchanges and national associations, which includes Options Market Makers.[495] SIP Data is defined in the Plan as information, including size and quote condition, on quotes including the National Best Bid and National Best Offer ("NBBO") for each NMS Security; Last Sale Reports and transaction reports reported pursuant to an effective transaction reporting plan filed with the Commission pursuant to, and meeting the requirements of Rule 601 and 608; trading halts, limit-up limit-down ("LULD") price bands,[496] and LULD indicators; and summary data or reports described in the specifications for each of the SIPs and disseminated by the respective SIP.[497]

CAT Data would include data from all SRO audit trails, combined into a single data source. In addition, it would include some off-exchange activity not captured on current SRO audit trails. Section 6.4(d) of the Plan requires the Participants to require their Industry Members to record and report order events to the Central Repository. The Commission notes that SRO audit trails currently do not include the activity of firms that are not members of that SRO.[498] And, currently only FINRA requires its members to report their off-exchange activity. While broker-dealers that trade off-exchange must be members of FINRA unless their activity fits the terms of the exemption in Rule 15b9–1,[499] firms that qualify for the exemption in that rule and that are not FINRA members do not report their off-exchange activity to OATS.[500] This exemption amounts to a large percentage of off-exchange activity. Broker-dealers that are not FINRA Members accounted for 48% of orders sent directly to ATSs in 2014, 40% of orders sent directly to ATSs in 2013, and 32% in 2012.[501] Because all SROs are Participants in the Plan, under the Plan all broker-dealers with Reportable Events, including off-exchange, would be required to report the required CAT Data to the Central Repository. And, the inclusion of these additional Reportable Events would make CAT Data more complete than the combination of current SRO audit trails.

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[486] *See* Adopting Release, *supra* note 9, at 45727.

[487] Changes in all four data qualities affect certain data-driven regulatory activities. The benefits of the Plan derive from the changes to these regulatory activities.

[488] *See* Sections IV.C.1.a(1) and IV.D.2.b(1), *supra* for a definition of completeness.

[489] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(a)(i).

[490] *See id.* at Section 1.1.

[491] An "NMS Security" is defined as "any security or class of securities for which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan, or an effective national market system plan for reporting transactions in listed options." *See* 17 CFR 242.600(b)(46).

[492] *See* CAT NMS Plan, *supra* note 3, at Section 6.3(c)(ii).

[493] *See id.* at Section 1.1. Audit trail data regarding OTC Equity Securities was not required under Rule 613, but the Participants, in consultation with the DAG, included OTC Equity Securities in the CAT NMS Plan so as to permit the retirement of OATS and thereby reduce costs to the industry. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9, Section A.1(a) n.16. The determination to include OTC Equity Securities would also have a positive effect on further reducing fragmentation of data sooner.

[494] *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[495] *See id.* at Section 6.4(d).

[496] *See* Plan to Address Extraordinary Volatility for information on LULD, *available at http://www.finra.org/sites/default/files/regulation-NMS-plan-to-address-extraordinary-market-volatility.pdf; see also* Securities Industry Automation Corporation, Consolidated Tape System, CTS, Output Multicast Interface Specifications, *available at https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/cts_output_spec.pdf* Securities Industry Automation Corporation, Consolidated Tape System, CQS, Output Multicast Interface Specifications, available at *https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/cqs_output_spec.pdf*. The UTP Plan Trade Data Feed ^{SM} (UTDF^{SM}), Direct Subcriber Interface Specification, Version 14.4 *available at http://www.utpplan.com/DOC/utdfspecification.pdf*.

[497] *See id.* at Section 1.1 and Section 6.5(a)(ii).

[498] This information can sometimes be inferred through data reported by member firms. *See* Securities Exchange Act Release No. 74581 (March 25, 2015), 80 FR 18036 (April 2, 2015) ("Proposed Amendments to Rule 15b9–1"), Section V.B.2; *see also* CAT NMS Plan, *supra* note 3, at Appendix C Section B.7(a)(ii)(A).

[499] *See id.* for details on the exemption to Rule 15b9–1 and the proposed modifications to the Exemption for Certain Exchange Members that would require a dealer to be a member of a registered national securities association to conduct most off-exchange activity. If these modifications are adopted, Section IV.F.1.c(2)B.i discusses counts of broker-dealers currently not represented in OATS; the 15b9–1 exclusion applies to approximately 125 firms, most of which are not expected to incur OATS reporting obligations if 15b9–1 modifications are approved.

[500] Furthermore, not all FINRA members are obligated to report to OATS. FINRA's rules exempt from reporting certain members that engage in a non-discretionary order routing process; additionally, FINRA has the authority to exempt other members who meet specific criteria from the OATS recording and reporting requirements, and has granted many such exemptions. *See supra* notes 396 and 397, and accompanying text. Approximately 799 firms that are excluded or exempt from OATS would incur CAT reporting obligations if the Plan were approved; *see also* Section IV.F.1.c(2)B.i, *infra*.

[501] *See* Proposed Amendments to Rule 15b9–1, *supra* note 498, at n.21. If the Commission adopts the proposed amendments to Rule 15b9–1 set out

CAT Data would also include many Reportable Events such as order origination, order routing, receipt of a routed order, order modifications, cancellations, and executions, and trade cancellations. Currently, OATS data contains most of these Reportable Events but does not cover all participants and does not include options.[502] For example, CAT Data would contain more events than EBS data, trade blotters, and public data. As previously noted, OATS data also do not include proprietary orders originated by a trading desk in the ordinary course of a member's market making activities (or "principal activity").[503] But, pursuant to Rule 613(j)(8),[504] principal trading would be included in CAT reporting requirements, an improvement over OATS. This requirement significantly improves completeness because such events are not included in current SRO audit trails, and account for a significant portion of market activity (40.5% of all transactions and 67% of all exchange message traffic according to a Commission analysis).[505] This would improve regulatory activities in which observation of pricing information, as it relates to market activity, is important for determining the legality and consequences of market activity of interest as well as regulatory analysis of market behavior in general.

CAT Data also would include the information described above for listed equities and options and OTC Equity Securities.[506] Therefore, the inclusion in CAT Data of all these products adds an additional level of completeness relative to current data sources.

(2) Data Fields

The CAT NMS Plan also would improve completeness by consolidating in a single source fields that currently may only be available from some data sources, and by including some fields that are difficult for regulators to compile. Not every data field that would be in CAT Data is currently included in SRO audit trails, and very few fields are included in all data sources.

The inclusion of consistent unique customer information, in particular, in the CAT Data represents a significant improvement over current SRO audit trails in terms of completeness. Rule 613(c)(7)(i) requires that a CAT Reporter report information to the Central Repository that uniquely identifies a customer across all broker-dealers.[507] As noted in the Baseline, very few current data sources contain customer information, and those that do are largely limited in the completeness and accuracy of this information, all of which significantly limits regulatory efficiency.[508] The identification of customers underlies numerous enforcement activities and many examination and surveillance activities of regulators. This would also allow regulators to obtain information efficiently regarding customers, such as issuers repurchasing their stock and short sellers.[509]

In addition to data fields providing customer information, the Plan would improve completeness by including other data fields not found on current SRO audit trails. For example, CAT Data would include allocation information, open/close information, Quote Sent Time, and information on whether a Customer gave a modification or cancellation instruction.

The information in the Allocation Report required by the CAT NMS Plan represents a significant improvement in completeness over current sources for subaccount allocation data, such as trade blotter and EBS data. Under the Plan, an Allocation Report would include the Firm Designated ID for any account(s), including subaccount(s), to which executed shares are allocated, the security that has been allocated, the identifier of the firm reporting the allocation, the price per share of shares allocated, the side of shares allocated, the number of shares allocated to each account, and the time of the allocation.[510] While most of the fields required on the Allocation Report are included on trade blotter or EBS data, their inclusion in CAT Data would significantly reduce the time and effort expended for regulators to acquire such information.[511] Because it is not required on EBS or in broker-dealer recordkeeping rules, the allocation time field on the Allocation Report provides information that is currently even more difficult for regulators to acquire than the other information on the Allocation Report. These data improvements should facilitate the use of allocation data in regulatory investigations and should result in more effective and efficient investigative processes. Allocation data also serves an important role in many other regulatory activities that aim to protect investors.[512] Indeed, allocation time is an extremely important data field because it is critical in investigations of violations like market manipulation and cherry-picking.[513]

In addition, while many of the elements contained in the definition of "Material Terms of the Order" are

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in the proposed modifications to the Exemption for Certain Exchange Members, the percentage of off-exchange activity captured by CAT Data that is not currently captured by another audit trail would be smaller, and fewer broker-dealers would be excluded from OATS, reducing the number of broker-dealers that would be added to regulatory data if the Plan were approved. Section IV.F.1.c(2)B.ii discusses counts of broker-dealers currently not represented in OATS; the 15b9–1 exclusion applies to approximately 125 firms, most of which are not expected to incur OATS reporting obligations if 15b9–1 modifications are approved. Specifically, the exemption from FINRA membership would be limited to dealers that effect transactions off the exchanges of which they are members solely for the purpose of hedging the risks of their floor-based activity, and brokers and dealers that effect transactions off the exchange resulting from orders that are routed by a national securities exchange of which they are members. *Id.* at Section II.

[502] *See* Section IV.D.2.b(1)A, *supra.*

[503] *Id.*

[504] *See* 17 CFR 242.613(j)(8).

[505] *See* Section IV.D.2.b(1)A, *supra* for a description of this analysis.

[506] *See supra* note 494.

[507] 17 CFR 242.613(c)(7)(i). Specifically, Sections 9.1 and 9.2 of Appendix D of the Plan require the CAT Data to include the following Customer information, at minimum: social security number or individual taxpayer identification number, date of birth, current name, current address, previous name and previous address. For legal entities, the Plan requires the reporting of the LEI (if available), tax identifier, full legal name and address. The Plan also requires that the following information about a Customer be reported to the Central Repository, at a minimum: Account owner name, account owner mailing address, account tax identifier, market identifiers, type of account, firm identifier number, prime broker ID, bank repository ID, and clearing broker. *See* CAT NMS Plan *supra* note 3, at Sections 9.1 and 9.2. The CAT Data must also support account structures that have multiple account holders. *See id.* Relatedly, the unique Customer-ID also improves accuracy because Rule 613 requires that it be consistent and associated with all Reportable Events involving that Customer. Current data sources do not provide consistent customer identifiers. *See* Sections IV.D.2.b(2)D *supra,* and IV.E.1.b(4), *infra.*

[508] *See* Sections IV.D.2.a(1) and IV.D.2.b(1)B, *supra.* As discussed above, the Commission notes that SRO audit trails typically do not provide customer information but a recent FINRA rule change would require its members to report to OATS non-FINRA member customers who are broker-dealers. *See supra* note 407.

[509] *See* Short Sale Reporting Study, *supra* note 413, for a discussion of the benefits of being able to identify short sellers. Because CAT Data would include a short sale mark and identify customers, regulators could use CAT Data to identify short sellers.

[510] *See* CAT NMS Plan, *supra* note 3, at Section 1.1; *see also* Exemption Order, *supra* note 18, at 11867.

[511] *See* Section IV.D.2.b(1)B, *supra,* for further information on Allocation Reports.

[512] *Id.*

[513] *Id.*

collected in current SRO audit trails, the CAT NMS Plan's definition of Material Terms of the Order expands the CAT Data beyond the coverage of current SRO audit trails and other sources. The CAT NMS Plan requires that the Material Terms of the Order be reported for order origination, routing, and the receipt of a routed order. And Material Terms of the Order is defined to include the security symbol, security type, price (if applicable), size (displayed and non-displayed), side (buy/sell), order type, if a sell order, whether the order is long, short, or short exempt, open/close indicator, time in force (if applicable), and any special handling instructions.[514] In addition, if the order is for a Listed Option, the Material Terms of the Order would be defined to include option type (put/call), option symbol or root symbol, underlying symbol, strike price, expiration date, and open/close.[515]

Because data on open/close indicators are not currently included in SRO audit trails, obtaining data on whether a trade opens or closes a position in equities is currently very difficult. Ready access to this information would facilitate regulators' ability to determine whether a purchase or sale increases or decreases equity exposure, such as when a buy covers a short position.[516] This would help regulators reconstruct customer positions without requiring specific position data and would assist in analysis of rules such as Rule 105 of Regulation M,[517] governing when short sellers can participate in a follow-on offering.[518] This information is also useful in investigating short selling abuses and short squeezes.[519] Among other things, a build-up of a large short position by one investor along with the spreading of rumors may be indicative of using short selling as a tool to potentially manipulate prices. Information on when the position decreases is also useful for indicating potential manipulation, insider trading, or other rule violations.[520] The ability to determine whether an order adds to a position, along with the timing of the order, is particularly important in detecting and investigating portfolio pumping or marking the close.[521]

The CAT Data would also include information regarding the sent time for Options Market Maker quotes and information about whether a modification or cancellation instruction for an order was given by a Customer associated with an order, or was initiated by a broker-dealer or exchange associated with the order. Neither of these data fields is currently readily available from existing SRO audit trails.[522] Quote sent time is particularly informative for certain narrow market reconstructions for enforcement investigations, and knowing whether the member or Customer made a modification or cancellation helps regulators understand the decisions that broker-dealers and others make in the interest of best execution.

The remaining data fields included in CAT Data are also included in some or all current SRO audit trails, although no single source contains all of them. For instance, Rule 613(c)(7)(vi)(C) requires the collection of audit trail data that links executions to contra-side orders and a CAT-Order-ID for the contra-side order.[523] An order identifier for the contra-side order(s) would help regulators better reconstruct executions. Although some current exchange audit trails identify counterparties to trades, this identification is sometimes more difficult for off-exchange equity trading.[524] Further, while all SRO audit trails contain time stamps, as CAT Data would, some sources of regulatory data do not currently include all the types of time stamps that would be in CAT Data.

Additionally, the inclusion of order display information (*i.e.*, whether the size of the order is displayed or non-displayed), and special handling instructions in CAT Data improve completeness because they are not always mandatory in SRO audit trail data, and therefore may not be consistently available without data requests to broker-dealers.[525] Order display information is useful for examining how hidden liquidity affects markets or how regulatory changes affect hidden liquidity, and special order handling instructions could assist in examinations of best execution and could allow regulators to better understand the role and trends of these instructions in the market.

Other information required by the CAT NMS Plan includes the security symbol, date and time of the Reportable Event, the identity of each Industry Member or Participant accepting, routing, receiving, modifying, canceling, or executing each order, the identity and nature of the department or desk to which an order is routed, if an order is routed internally within the system of an Industry Member, a CAT-Order-ID, changes in any Material Term of the Order (if the order is modified), execution capacity, the CAT-Order-ID of any contra-side order(s), and the SRO-Assigned Market Participant Identifier of the clearing broker or prime broker.[526] Of these fields, the security symbol and date are the only data found on all current data sources.

The Commission preliminarily believes that the CAT Data would include all data elements that would be useful and efficient to include in a consolidated audit trail. The Commission previously considered which fields should be reported to CAT when proposing and adopting Rule 613. The set of data fields required by Rule 613 reflected the Commission's assessment, as informed by public comment, of the benefits and costs of including various data elements in CAT.[527] While the costs and benefits of including particular fields can change due to technological advances and/or changes in the nature of markets, the Plan contains provisions regarding periodic reviews and upgrades to CAT that could lead to proposing additional data fields that are deemed important.[528] In addition the Commission reviewed gap analyses that examine whether the CAT Data would contain all important data elements in current data sources.[529] As a result of this review, the Commission is aware that one data gap involves OATS data fields that allow off-exchange transactions to be matched to their corresponding trade reports at trade reporting facilities, and recognizes that these fields are important to assure trade reporting requirements are being met for off-exchange trading.[530] Similarly, the Commission notes that EBS includes 13 data elements that are not required by CAT or derivable through other CAT fields and would thus reflect some limitations of the Plan if EBS were retired before those missing data elements were incorporated into CAT.[531] However, as discussed in Section 3 of Appendix D of the Plan, prior to the retirement of existing systems, the CAT Data must contain data elements sufficient to ensure the same regulatory coverage provided by existing systems that are anticipated to be retired.[532] The Commission therefore expects that any missing elements that are material to regulators would be incorporated into CAT Data prior to the retirement of the systems that currently provide those data elements to regulators. And the Commission preliminarily believes that CAT Data would include the audit trail data elements that currently exist in audit trail data sources and that could be retired upon implementation of the CAT.

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[514] *See* CAT NMS Plan, *supra* note 3, Section 1.1; *see also* 17 CFR 242.613(j)(7).

[515] *Id.*

[516] The open/close indicator would help to identify buy to cover orders because a buy order that closes a position would presumably be a buy-to-cover order. *See* Proposing Release *supra* note 9, at 32575. The Commission notes that the accuracy of this data field may depend on how the Plan Processor interprets when CAT Reporters should populate the field with particular permitted values. *See infra* note 537 and accompanying text.

[517] 17 CFR 242.105.

[518] For a discussion of additional benefits of position information and buy to cover information, *see* Short Sale Reporting Study, *supra* note 413; *see also* Press Release: SEC Charges Six Firms for Short Selling Violations in Advance of Stock Offerings (October 14, 2015), *available at http://www.sec.gov/news/pressrelease/2015-239.html.*

[519] *See* Proposing Release, *supra* note 9 at 32575.

[520] *Id.*

[521] *Id.*

[522] *See* Exemption Order, *supra* note 18 at 11857 and 11861.

[523] 17 CFR 613.242(c)(7)(vi)(C).

[524] For off-exchange trading, OATS records sometimes do not directly identify counterparties. In the case of ATS trades, sometimes counterparty broker-dealers can only be identified through TRF records; sometimes ATS OATS records alone suffice. For internalized trades, the reporting broker-dealer is the counterparty. By combining OATS with TRF data, regulators can identify the broker-dealers representing the counterparties for over 99% of TRF reported trades, but identifying customer account information generally requires a data request to those broker-dealers. *See* Section IV.D.2.b(2)A, *supra.*

[525] *See supra* note 412.

[526] *See* CAT NMS Plan, *supra* note 3, Sections 6.3(d); 6.4(d).

[527] *See* Adopting Release, *supra* note 9, at 45751.

[528] *See* Section IV.E.3a, *infra* for a discussion of adding new data fields and other requirements for upgrading the CAT Data after approval.

[529] The Commission acknowledges that the Participants are continuing to study gaps between current regulatory data sources and the Plan as

b. Accuracy

This Section analyzes the expected effect of the CAT NMS Plan, if approved, on the accuracy of the data available to regulators.[533] In general, the Commission preliminarily believes that the requirements in the CAT NMS Plan for collecting, consolidating, and storing the CAT Data in a uniform linked format, the use of consistent identifiers for Customers, and the focus on sequencing would promote data accuracy.

The Commission notes that the full extent of improvement that would result from the Plan is currently unknown, because the Plan defers many decisions relevant to accuracy until the Plan Processor publishes the Technical Specifications and interpretations.[534] In particular, the CAT NMS Plan specifies that the "[t]echnical Specifications shall include a detailed description of . . . each data element, including permitted values, in any type of report submitted to the Central Repository" [535] and "the Plan Processor shall have sole discretion to amend and publish interpretations regarding the Technical Specifications." [536] This leaves open precise definitions and parameters for the data fields to be included in CAT Data.[537]

Nonetheless, the Commission preliminarily believes that the Plan provides some procedural protections to mitigate this uncertainty and help promote accuracy. For example, the Plan requires that, at a minimum, the Technical Specifications be "consistent with [considerations and minimum standards discussed in] Appendices C and D," and that the initial Technical Specifications and any Material Amendments thereto must be provided to the Operating Committee for approval by Supermajority Vote.[538] Further, all non-Material Amendments and all published interpretations must be provided to the Operating Committee in writing at least ten days before publication, and shall be deemed approved unless two or more unaffiliated Participants call the matter for a vote of the full Operating Committee.[539]

(1) Data Errors

The CAT NMS Plan specifies a high-level process for handling errors that includes target Error Rates for data initially submitted by CAT Reporters and a correction process and timeline. In particular, the Plan specifies an initial maximum Error Rate, which measures errors by CAT Reporters and linkage validation errors,[540] of 5% for reports received by the Central Repository before the error correction process and contemplates the reduction of this Error Rate over time. It is difficult to conclude whether the Error Rates and processes in the CAT NMS Plan would constitute an accuracy improvement as compared to current data sources.

The Plan states that 5% is an appropriate initial Error Rate, to allow CAT Reporters the opportunity to get used to a new reporting regime, and that the Error Rate should be reduced over time, with goal of a 1% Error Rate to be achieved one year after each new category of Reporters is required to begin reporting.[541] This was determined based on Participants' experience with OATS. The initial rejection rates for OATS when it was initially implemented was 23%,[542] although more recent experience with OATS reporting indicates error rates below 3% following the implementation of additional OATS upgrades over the past 10 years and a current error rate of less than 1%.[543]

But, because the current OATS error rate is below 1%, the Commission preliminarily believes that the initial

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filed. CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9; *see also* SEC Rule 613—Consolidated Audit Trail (CAT) OATS—CAT Gap Analysis and SEC Rule 613—Consolidated Audit Trail (CAT) Revised EBS—CAT GAP Analysis, *available at http://www.catnmsplan.com/gapanalyses/index.html.*

[530] The Commission notes that Rule 613 does not require the inclusion of this information. This information did not exist at the time the Commission adopted Rule 613 and such information on exchange trades does not exist today. The Commission expects that the requirements discussed in Section 3 of Appendix D of the Plan would result in the inclusion of this information in the CAT Data.

[531] *See* SEC Rule 613—Consolidated Audit Trail (CAT) Revised EBS—CAT GAP Analysis, *available at http://www.catnmsplan.com/gapanalyses/p450537.pdf.*

[532] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3.

[533] As discussed above and in the Adopting Release, accuracy refers to whether the data about a particular order or trade is correct. *See* Adopting Release, *supra* note 9, at 45727.

[534] *See* CAT NMS Plan, *supra* note 3, at Section 6.9.

[535] *Id.* at Section 6.9(b)(v).

[536] The CAT NMS Plan provides details regarding how the responsibility for these decisions would be shared between the Operating Committee and the Plan Processor, with the Plan Processor having responsibility for data definitions and interpretations. *See* CAT NMS Plan, *supra* note 3, at Section 6.9(c)(i).

[537] For example, the completeness Section notes that the open/close indicator for equities does not exist in current data sources (*see* Section IV.E.1.a(2)). The accuracy of the open/close indicator would be subject to Plan Processor discretion, because the Plan Processor would have responsibility for defining the permitted values and interpreting when CAT Reporters would use such permitted values and the Plan Processor would not have guidance from previous data sources on how to define or interpret such a field. While the Commission would ultimately be able to correct such misinterpretations, regulators may not detect such a misinterpretation until the misinterpretation harms an investigation, exam, or other analysis. Based on its experience with short sale indicators, the Commission believes that defining and interpreting the open/close indicator would be particularly complex. *See* SEC, Division of Market Regulation: Responses to Frequently Asked Questions Concerning Regulation SHO, Question 2.5, *available at http://www.sec.gov/divisions/marketreg/mrfaqregsho1204.htm* ("Regulation SHO FAQs").

[538] *Id.* at Section 6.9(a). The Commission notes that the standards in Appendices C and D do not cover all decisions that would affect the accuracy of the data.

[539] *See* CAT NMS Plan, *supra* note 3, at Section 6.9(c)(i).

[540] The Commission notes that there is some uncertainty on whether the Error Rate definition includes any additional errors attributable to the Plan Processor because the Plan does not explicitly state whether Plan Processor errors are included in the Error Rate or not; it is also not clear whether Plan Processor errors are included in linking errors. *See id.* at Article VI, 6.1(n)(v) n.1; Appendix C, Section A.3(b), n.102. Additional uncertainty exists because the Operating Committee would determine the details regarding error definitions in the Technical Specifications after the Plan is approved.

[541] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(b).

[542] *See id.* at Appendix C, Section A.3(b), n.106.

[543] *See* Memorandum to File No. S7–11–10 regarding Telephone Conferences with FINRA (April 17, 2012) *available at http://www.sec.gov/comments/s7-11-10/s71110-116.pdf.*

percentage of errors in CAT would be higher than current percentage of errors in OATS, though the OATS error rate may not be directly comparable to the Error Rate in the Plan.[544] Given the magnitude of CAT, the fact that many CAT Reporters would be new to audit trail reporting, and that options would be covered for the first time, the Participants believe that 5% is an appropriate initial Error Rate.[545] And the Plan injects some uncertainty by asserting that this initial 5% rate is subject to the quality assurance testing period to be performed prior to launch, and then again before each new batch of CAT Reporters are brought online.[546] In time, the rate could be lowered, but it also could be raised.

The Plan specifies an error correction process after initial reports are received and indicates that practically all errors identifiable by the validations used in the error correction process would be corrected by 8:00 a.m. Eastern Time on day T+5, stating that errors are expected to be "de minimis" after the error correction period.[547] Specifically, the Plan Processor must run initial validation checks on the data by noon eastern time on day T+1 (four hours after the submission deadline for the data). Those validation checks must be published in the Technical Specifications (as discussed further below) and have the objective to ensure that data is accurate, timely, and complete as near as possible to the time of submission. Once errors are identified, the Plan Processor must accept corrections via manual web-based entry and via batch uploads. Although there is a specific timeframe for performing these corrections, the Plan Processor must accept error corrections at any time.[548]

Rather than providing details on the validations that would occur, however, the Plan provides high-level requirements for the validations and delegates the detailed design of the specific validations to the Plan Processor (with the involvement of the Operating Committee and the Advisory Committee).[549] Additionally, the Plan does not provide the level of detail necessary to verify whether the CAT validation process would run the same validations as OATS, whether current validations would be relevant, and what validations, if any, would be added.

As noted above, it is therefore difficult to conclude whether the Error Rates and processes in the CAT NMS Plan would constitute an accuracy improvement as compared to current data sources. With respect to OATS, FINRA currently performs over 152 validation checks on each order event reported.[550] After corrections, approximately 1–2% of each day's recorded events remain unmatched (*i.e.*, multi-firm events, such as order routing that cannot be reconciled).[551] However, the Commission is not certain that those error rates are directly comparable to the Error Rates permitted for CAT Data in the Plan given the increased scope and level of linkages specified in the Plan, and the new, large, and untested system. The Commission is not aware of other systems that track and record similar error rates, although the Commission does experience issues with errors contained in other sources of data when the Commission attempts to use that data. Accordingly, the Commission is unable to conclude whether the Error Rates and processes in the Plan would constitute an accuracy improvement compared to current data.

(2) *Event Sequencing*

A. Clock Synchronization

Rule 613(d)(1) and (2) requires that the CAT NMS Plan require that the business clocks of Participants and their members be synchronized to a specified standard of precision and for protocols to be in place for that standard to be maintained over time. Complying with this clock synchronization standard will require that, for the purpose of recording the date and time of Reportable Events, the business systems of Participants and their members be synchronized consistently with "industry standards." The Commission did not define the term "industry standard" in Rule 613, though it noted that it expected the Plan to "specify the time increment within which clock synchronization must be maintained, and the reasons the plan sponsors believe this represents the industry standard." [552]

The CAT NMS Plan describes the "industry standard" in this context in terms of the technology adopted by the majority of the industry.[553] The Plan therefore bases its clock synchronization standard on current practices of the broker-dealer industry generally and provides that one standard would apply to all CAT Reporters. Specifically, Section 6.8(a) of the CAT NMS Plan requires CAT Reporters to synchronize their time clocks to the time maintained by the NIST with an allowable clock offset of 50 milliseconds, which the Plan determines is consistent with the current industry standards, as defined in the Plan. The Plan further requires annual review of the clock synchronization standard to evaluate its achievement of the Plan's goals related to clock synchronization. Section 6.8(c) of the Plan requires the Chief Compliance Officer to annually evaluate the clock offset tolerance and to make recommendations to the Operating Committee regarding whether industry standards have evolved such that the standard in Section 6.8(a) should be shortened.[554]

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[544] *See* Section IV.D.2.b(2)A, *supra*, for discussion of current regulatory data error rates. It is important to note that both the 1% OATS error rate and the 5% proposed CAT Error Rate represent error rates measured at initial data submission. Furthermore, some situations that do not qualify as an error in OATS (*i.e.*, a route that cannot be linked because the routing destination is not required to report OATS) would qualify as an error under CAT. Furthermore, error rates after data correction are not known for OATS, and are anticipated to be "de minimis" under CAT, as discussed in note 547, *infra*. Finally, definitions of "error" for both OATS and CAT Data are dependent on proscribed data validation checks; if data is reported and passes validation checks, it is assumed to be correct. When validation checks are exhaustive and stringent, error rates are expected to be higher than when validation checks are minimal. Consequently, the Commission is cautious in directly comparing OATS reported and proposed CAT Error Rates.

[545] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(b). *See also* Section IV.H.2.b, *infra* for a discussion and solicitation of comment on alternative Error Rates.

[546] *See id.* at Appendix C, Section A.3(b).

[547] *See id.* at Appendix C, Section A.3(b) n.102. "De minimis" is not defined and no numerical Error Rate is given. The Plan also includes a compliance program intended to help achieve this goal.

[548] *See* Section IV.E.1.d, *infra*. The RFP requested that Bidders provide information on how data format and context validations for order and quote events would be performed and how errors would be communicated to CAT Reporters; a system flow diagram showing how and when different types of validations would be completed; and how Customer information would be validated. Bidders noted that the validations would be performed via rules engines (using standard data validation techniques like format checks, data type checks, consistency checks, limit and logic checks, or data validity checks), and processing would be done in real time during data ingestion. The Plan Processor would be required to perform validations within three specified categories, which must be set out in the Technical Specifications document: File Validations (confirmation that the file is received in the correct format); Validation of CAT Data (checks of format, data type, consistency, range/logic, data validity, completeness, and timeliness); and Linkage Validation (checking the "daisy chain"). *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 7.2. If errors are found, the data would be stored in an error database and notification sent to the CAT Reporter.

[549] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 7.2 (discussing validation requirements); *see also id.* Appendix C at Section A.3(b) (delegating responsibility regarding measurement of Error Rates to the Plan Processor).

[550] *See* Adopting Release, *supra* note 9, at 45729.

[551] *Id.* at 45778.

[552] *See* Adopting Release, *supra* note 9, at 45774.

[553] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section 12(p).

[554] *See id.* at Section 6.8.(c) and Appendix C, Section A.3.(c)

The Commission preliminarily believes that the clock synchronization standards in the CAT NMS Plan are reasonably designed to improve the accuracy of market activity sequencing by increasing the percentage of order events that could be chronologically sequenced relative to other order events,[555] but notes that the improvements to the percentage of sequenceable order events by Plan standards are modest and the requirements of the Plan may not be sufficient to completely sequence the majority of market events relative to all other events.

As discussed in the Baseline Section, 39% of the broker-dealers responding to the FIF Clock Offset Survey currently synchronize their clocks to a clock offset tolerance of greater than 50 milliseconds.[556] Accordingly, the 50 millisecond requirement for all CAT Reporters (except on manual order handling systems) would result in the availability of more precise time stamps from many broker-dealers[557] and would increase the number of order events that could be accurately sequenced relative to each other.

To evaluate the proportion of order events that could be sequenced with the clock offset tolerance specified in the CAT NMS Plan, the Commission has conducted an analysis of the frequency of market events occurring within 100 milliseconds of an event in a different trading venue in the same security.[558] Table 5 (CAT and Current Clock Offset Tolerance) shows the percentage of events for listed equities and options that could be accurately sequenced with one-second and 50-millisecond clock offset tolerances.

TABLE 5—CAT AND CURRENT CLOCK OFFSET TOLERANCE

		% of Unrelated order events	
Minimum time between adjacent events	Clock offset tolerance	Equities (%)	Options (%)
2 seconds	1 second	1.31	6.97
100 milliseconds	50 milliseconds	7.84	18.83

The analysis finds that the current FINRA one-second clock offset tolerance allows only 1.31% of unrelated order events for listed equities and 6.97% of unrelated order events for listed options to be sequenced. The proposed 50-millisecond clock offset tolerance could accurately sequence 7.84% for listed equities and 18.83% for listed options of such events included in the MIDAS data. This analysis overestimates the portion of unrelated events that the proposed clock synchronization standard could sequence because the analysis includes only trade and quote events observable in the MIDAS data. The data currently available to the Commission provides only a rough and upwardly-biased estimate of how many of these events could be sequenced by the order data that would be captured by the CAT. In sum, the results of the Commission's analysis suggest that the standards required by the Plan do represent an improvement over current standard but that the majority of market events would remain impossible to sequence based on the Plan's required clock synchronization standards.

This analysis does not consider events in OTC Equity Securities. The Commission believes that the proposed clock synchronization standard could accurately sequence a higher proportion of unrelated events in OTC Equity Securities because OTC Equity Securities trade less frequently than NMS equities and unrelated order events may be less frequent in OTC Equity Securities than in listed equities. The Commission therefore preliminarily believes that the proposed 50 millisecond clock offset tolerance in the CAT NMS Plan could improve accuracy by modestly increasing the number of events that could be sequenced in OTC Equity Securities.

The Plan acknowledges that the required clock offset tolerance, which is based on its determination of the current industry standard, would not be sufficient to accurately sequence all order events by their time stamps alone.[559] In particular, the Plan states that "[f]or unrelated events, *e.g.,* multiple unrelated orders from different broker-dealers, there would be no way to definitively sequence order events within the allowable clock drift as defined in Article 6.8." [560] This in turn limits the benefits of CAT in regulatory activities that require event sequencing, such as the analysis and reconstruction of market events, as well as market analysis and research in support of policy decisions, in addition to examinations, enforcement investigations, cross-market surveillance, and other enforcement functions.

The Plan discusses its determination of the current industry standard and specifies implementation requirements for the clock synchronization standards in Appendix C.[561] As noted above, the

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[555] Independent of the potential time clock synchronization benefits, the order linking data that would be captured in CAT should increase the proportion of events that could be sequenced accurately. This reflects the fact that some records pertaining to the same order could be sequenced by their placement in an order lifecycle (*e.g.,* an order submission must have occurred before its execution) without relying on time stamps. This information may also be used to partially sequence surrounding events.

[556] *See* Section IV.D.2.b(2)B.i, *supra* (reporting results of this survey); *see also* FIF Clock Offset Study, *supra* note 127.

[557] As noted above, FINRA has indicated that it is considering proposing a rule change that would require a 50 millisecond clock offset tolerance. If this rule change is proposed and approved, more entities would record time stamps with data at a 50 millisecond clock offset tolerance regardless of whether the CAT NMS Plan is approved.

[558] The methodology to calculate these frequencies starts with the steps described in *supra* note 438 and then subtracts the result from one to get the percentage of unrelated orders that could be sequenced. This assumes that consecutive unrelated events within twice the clock offset tolerance cannot be sequenced. An unrelated event is an order event at a different venue.

[559] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c). Order events occurring within a single system using the same time clock could be accurately sequenced by their time stamps, assuming that their time stamps are not identical. The CAT NMS Plan does not specify the approach that would be used to sequence events when time stamps are identical or indicate how this decision would be made.

[560] *Id.* at n.110. Events involving the same order routed across systems could be logically sequenced using routing-related data, because a routed order must be sent before it can be received, and received before it can be executed. However, the Plan would not facilitate the accurate sequencing of events that occur in different systems within 100 milliseconds of each other (twice the clock offset tolerance) that are not linked using a parent-child order relationship. The CAT NMS Plan does not provide a solution that will sequence these events, but recognizes the issue and states that "the Participants plan to require that the Plan Processor develop a way to accurately track the sequence of order events without relying entirely on time stamps." *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[561] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

Plan bases industry standards on current practices of the broker-dealer industry, which are derived from a survey of broker-dealers, and on the assumption that a change in industry standards would be premised on "the extent existing technology that synchronizes . . . clocks with a lower tolerance . . . becomes widespread enough throughout the industry to constitute a new standard."[562]

The Commission notes however, that the current practices for exchanges and Execution Venues may differ from the industry standard for broker-dealers as defined in the Plan, and current practices for certain systems within broker-dealers may vary by the system within the broker-dealers. As noted in the Baseline Section, the Commission does not have precise information on the clock synchronization standards on exchange and ATS matching engines and quoting systems, but exchanges may currently synchronize their clocks to a 100 microsecond or less clock offset tolerance, and have an average clock offset of 36 microseconds.[563] By defining industry standards based on practices of the broker-dealer industry generally, the Plan does not account for these differences. Further, defining industry standards by majority practices may have the unintended effect of setting a standard that delays adopting advances in technology.

Despite these limitations, it is worth noting that the Plan requires the CCO of the Plan Processor to develop and conduct an annual assessment of Business Clock synchronization.[564] Moreover, Plan Participants must require Industry Members to certify periodically that their Business Clocks comply with the clock synchronization standard and that any violations thereof are reported to the Plan Processor and the Plan Participant.[565] Thus, the Commission believes that these provisions would help ensure that the benefits of clock synchronization are maintained.

B. Time Stamp Granularity

The Commission preliminarily believes that the minimum time stamp granularity required by the Plan would result in some improvement in data accuracy, but that the level of improvement could be limited. Despite the modest level of direct improvements expected from the Plan's minimum time stamp granularity standards, the Commission preliminarily believes that the Plan should continue to have a time stamp granularity standard because the Plan provides a mechanism for making future improvements and monitoring whether more granular time stamps would provide better quality CAT Data and be feasible given technology improvements.

The level of precision or granularity with which time stamps are recorded has significant implications for the usability of audit trail data in terms of sequencing events, matching records, and linking the data to other data sources. In some current regulatory data, the relative lack of time stamp granularity standards for data reporters could lead to difficulties in accurately sequencing events or linking data with other data sources. Rule 613(d)(3) requires that CAT Reporters record time stamps to reflect current industry standards and be at least to the millisecond.[566] Furthermore, the Plan requires Participants to adopt rules requiring that CAT Reporters that use time stamps in increments finer than milliseconds use those finer increments when reporting to the Central Repository.[567] Consistent with Rule 613, Section 6.8(b) of the CAT NMS Plan requires millisecond or less time stamps. However, the Commission granted exemptive relief for manual orders to be recorded at the granularity of one second or better.[568] Further, pursuant to Rule 613, if a CAT Reporter's system already utilizes time stamps in increments less than the minimum required by the Plan, the CAT Reporter must record time stamps in such finer increments.[569]

The Plan asserts that the millisecond increment required for CAT Data reflects the industry standard level of granularity.[570] As noted in the discussion of clock synchronization, the Commission did not define the term "industry standard" in Rule 613. The Plan therefore bases its standard for time stamp granularity on current practices of the broker-dealer industry generally, and provides that one standard would apply to all CAT Reporters. There appears to be a wide divergence of industry standards in practice, ranging from full seconds to microseconds for latency-sensitive applications, and the Plan describes the slower systems as mostly older ones that cannot support a finer time stamp granularity.[571] Many of the systems from which regulators currently obtain data already capture time stamps in increments of milliseconds or less. For example, OPRA allows for time stamps in nanoseconds, and the other SIPs require time stamps in microseconds for equity trades and quotes.[572] However, OATS and EBS do not. Current OATS rules require time stamps to be expressed to the nearest second, unless the member's system expresses time in finer increments; and as of September 2014, approximately 12% of OATS records contain time stamps greater than one millisecond. EBS records either do not contain times or express time stamps in seconds.[573]

Thus, to the extent that some current data sources report time stamps in increments coarser than a millisecond, which is the case for 12% of OATS records and all EBS records, the Commission expects the CAT millisecond time stamp requirement to improve data, and thereby allow regulators to more accurately determine the sequence of market events relative to surrounding events.

The Commission preliminarily believes, however, that benefits from the more granular time stamps could be limited by the level of clock synchronization required by the Plan. In particular, the Commission believes that time stamp granularity would not be the limiting factor in sequencing accuracy, because recording events with time stamps with resolutions of less than one millisecond cannot help to sequence events occurring on different venues with clocks that may be 100 milliseconds out of sync due to clock synchronization offsets.[574] Therefore, the benefits of time stamping order events at increments finer than a millisecond would be limited without also improving the clock synchronization standards of the Plan.

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[562] *Id.*

[563] *See supra* notes 435 and436.

[564] *See* CAT NMS Plan, *supra* note 3, Section 6.2(a)(v)(M).

[565] *See id.* at Section 6.8(a)(ii) and (iii).

[566] 17 CFR 242.613(d)(3). This requirement does not apply to certain Manual Order Events, which are exempted from the requirement and are captured at one-second increments. Time stamp granularity on manual order events is discussed separately in the Alternatives Section.

[567] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[568] *See* CAT NMS Plan, *supra* note 3, at Section 6.8(b) and Appendix C, Section A.3(c) (explaining that recording Manual Order Events at the millisecond level would be costly and ultimately arbitrary or imprecise due to the human interaction); *see also* Exemption Order, *supra* note 18, at 11868–9.

[569] *Id.*

[570] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[571] *Id.* Because older technology cannot support finer time stamp increments, members with older systems would incur significant effort and cost to upgrade those systems to support reporting data in milliseconds. The newest systems support finer increments, but include mostly the subset of systems dealing with low latency trading. Electronic Order Handling and Trading systems are commonly set at the millisecond level; *see, e.g.,* FIF Letter.

[572] *See* Section IV.D.2.b(2), *supra.*

[573] *Id.*

[574] For example, under the requirements in the Plan, an order event at Broker-Dealer A could have a time stamp that is 1 millisecond sooner than an order event at Broker-Dealer B even if the event at Broker-Dealer B actually occurred 99 milliseconds sooner. This could occur if Broker-Dealer A's

(3) Linking and Combining Data

The Commission believes the requirements of Rule 613 and the Plan related to data linking would result in improvements to the accuracy of the data available to regulators, but the extent of the improvement would depend on the accuracy of the linking algorithm and the reformatting process that the Plan Processor would eventually develop.

As discussed in the Baseline, data is currently stored in multiple formats, is difficult to merge, and results in errors during the merging process. Moreover, in some cases, the data sources do not capture the information necessary to link records, while in other cases linking must be done with algorithms that accomplish the linking with some degree of error.

Rule 613(e)(1) generally requires the creation and maintenance of a Central Repository that would receive, consolidate, and retain information reported to the CAT.[575] Further, the rule requires that the Central Repository store and make available to regulators data in a uniform electronic format and in a form in which all events pertaining to the same originating order are linked together in a manner that ensures timely and accurate retrieval of information reported to the CAT.[576]

The Commission preliminarily believes that the requirement that data be stored in a uniform format would eliminate the need for regulators who are accessing the data to reformat the data. As noted in the Baseline Section above, regulators face delays and inaccuracies when attempting to reformat and link data from multiple sources, such as linking trade blotters from several broker dealers with SRO audit trails. Given that the reformatting of CAT Data would be accomplished by individuals that likely specialize in this activity and that repetitively do so in a prescriptive and formalized way, this requirement could reduce the errors that could be introduced in the current regime where reformatting data is often done on an ad hoc basis by regulatory Staff who need to work with the data.[577] In other words, the Plan Processor would develop a reformatting process by working with CAT Reporters to build an expertise in harmonizing the various formats that it receives from Reporters. The Plan Processor could then build, test, and refine the reformatting process with the ability to go back to the CAT Reporters for further clarification. Even if only one Staff member at each SRO or Affiliated Participant developed the expertise necessary to reformat each of the various formats and ran a reformatting process on order data, this would result in a duplication of efforts compared to one centralized entity (the Plan Processor) developing the expertise and running the reformatting process. Storing data in a linked format removes the need for regulators to link information from multiple lifecycle events of an order or orders themselves, which could further reduce errors and increase the usability of the data. The Commission recognizes, however, that despite the potential improvements, the CAT Data could still contain errors introduced in the reformatting and linking processes.

The process for linking orders designated in the CAT NMS Plan is similar to the process FINRA currently uses to link OATS records across market participants. However, the Plan would significantly improve the ability of regulators to link order events compared to OATS, and would link this activity to specific customers unlike current audit trail data.[578] CAT Reporters must report a series of unique identifiers that are designed to allow records of events that occur over the order's lifecycle to be linked together to determine how the order was handled and how the order interacted with other orders.[579] The Plan Processor must then create the initial linkages in the submitted data; unlike in OATS, the Plan Processor would verify these linkages as part of its data validity checks.[580] In general, the CAT NMS Plan would link orders using the "daisy chain approach," where CAT Reporters assign their own identifiers to each order event that the Plan Processor later replaces with a single identifier (the CAT Order-ID) for all order events pertaining to the same order.[581] The Central Repository at a minimum must be able to create linkages between all order events that are internalized, between the Customer execution and a proprietary order in the case of a riskless principal transaction, between two broker-dealers, between a broker-dealer and an exchange, and vice versa, between executed orders and trade reports, between various legs of option/equity complex orders, and between order events for all equity option order handling scenarios that currently are or could potentially be used by CAT Reporters.[582]

Unlike OATS data, CAT Data would be less prone to breaking the order lifecycle chain when an order is sent across market participants because the order lifecycle linking procedure across reporters would be uniform and all industry participants would be reporters.[583] Currently, linking procedures across SROs are not uniform, which complicates reconstructing order lifecycles. Furthermore, because some broker-dealers are not required to report to OATS, these broker-dealers' activity cannot be completely reconstructed from audit trail data, and therefore, orders that they handle cannot be traced through their lifecycle, effectively severing the links between the order being received and the order's final disposition. Furthermore, as covered elsewhere, unlike other data sources, CAT Data would link orders to Customers because the Plan requires the order lifecycle to be linked back to the original Customer, and the Plan Processor must be able to fix linkages when error correction files are submitted.[584] While the success of such a matching process is dependent on the accurate reporting of order linkages by CAT Reporters,[585] Appendix D directs the Plan Processor to ensure that breaks in certain lifecycle linkages must not cause the entire lifecycle to break or

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systems are recording times 50 milliseconds ahead of NIST while Broker-Dealer B's systems are recording times 50 milliseconds behind NIST. Both broker-dealers' systems would be within the Plan's allowable clock synchronization tolerance.

[575] 17 CFR 242.613(e)(1); *see also* CAT NMS Plan, *supra* note 3, at Section 6.5(a) and (b).

[576] 17 CFR 242.613(e)(1).

[577] Whether errors would decrease depends on the actual formatting process used.

[578] As discussed above, the Commission notes that SRO audit trails typically do not provide customer information but a recent FINRA rule change requires its members to report to OATS non-FINRA member customers who are broker-dealers. *See supra* note 407.

[579] *See id.* at Section 6.3(d)(i) through (vi).

[580] These data validations are to be established in a Technical Specifications document by the Plan Processor. Consequently, it is as yet unclear precisely how that process would occur. *See id.* at Appendix D, Section 7.2; Appendix C, Section A.3(a) (validations ensure that data is submitted in required formats and that lifecycle events can be accurately linked).

[581] *See id.* at Appendix D, Section 3.

[582] *See id.*

[583] *See* Section IV.D.2, *supra*.

[584] *See id.*

[585] For example, assume two broker-dealers handle an order that is ultimately executed on an exchange. Broker-Dealer A receives the order, and transmits it to Broker-Dealer B, that routes it to Exchange C where it is executed. In order for the Plan Processor to link these three order events, Broker-Dealer A would need to report the order and its routing to Broker-Dealer B; B would need to correctly echo A's order ID in its CAT reporting and its route to Exchange C, and C would need to correctly echo Broker-dealer B's order ID in its CAT reporting.

cause a CAT Reporter that correctly reports information to have its submission rejected.[586]

The CAT NMS Plan does not provide sufficiently detailed information for the Commission to estimate the likely Error Rates associated with the linking process required by the CAT NMS Plan. Indeed, the 5% Error Rate covers data from CAT Reporters, but the Plan Processor could create errors as well, for example, through the linking process. Further, the Plan does not include details on how the Plan Processor would perform the linking process, identify broken linkages, and seek corrected reports from CAT Reporters to correct broken linkages. Instead, the Plan defers key decisions regarding the validation process until the selection of a Plan Processor and the development of Technical Specifications.[587] Accordingly, while the centralized linking should generally promote efficiencies and accuracies in linking, these uncertainties make it difficult for the Commission to gauge the degree to which the process for linking orders across market participants and SROs would improve accuracy compared to existing data, including OATS.[588]

Uncertainties also prevent the Commission from determining whether the process for converting data into a uniform format at the Central Repository would improve the accuracy of the data over existing audit trail accuracy rates. The Plan includes two alternative approaches to data conversion. In the first, called Approach 1, CAT Reporters would submit data to the Central Repository in an existing industry standard protocol of their choice such as the Financial Information eXchange ("FIX") protocol. In Approach 2, CAT Reporters would submit data to the Central Repository in single mandatory specified format, such as an augmented version of the OATS protocol. Under Approach 1, the data must be converted into a uniform format at the Central Repository in a second step. Under Approach 2, the data is already in a uniform format at the time of submission. The Plan defers the decision regarding which approach to take until the selection of a Plan Processor and the development of Technical Specifications.

The Commission preliminarily believes that Approach 1 would likely result in a lower Error Rate than Approach 2. Under Approach 1, the CAT Reporters would presumably be submitting the actual data captured in real time without having to translate it into another format. In addition, under Approach 1, the conversion would be performed at the Central Repository by the Plan Processor, rather than the conversion being performed by each of the approximately 1,800 individual CAT Reporters or their vendors, which should reduce potential points where errors in formatting could be introduced, and provide for economies of scale.[589] This would likely result in increased efficiency and accuracy due to specialization by the Plan Processor. However, while the Commission preliminarily believes that Approach 1 is likely to result in greater data accuracy than Approach 2, because of uncertainties regarding expected Error Rates and error rates in current data, the Commission is unable to evaluate the degree to which that approach would improve data accuracy relative to currently available data.[590]

Uniquely complex situations also pose a difficulty for assessing the ability of the Plan Processor to build a complete and accurate database of linked data that regulators could query for regulatory purposes. First, the Plan requires the Plan Processor, in consultation with industry, to develop a linking mechanism that would allow the option and equity legs of multi-leg trades to be linked within the Central Repository.[591] Because the mechanism for this linkage is not yet determined, the Commission cannot assess the degree of the expected linkage error rate but, given that equities are not linked to options in current data sources, the Commission expects this feature to significantly improve the accuracy of linking equities to options.

Second, the Commission in the Proposing Release noted concern about the ability of the daisy chain approach to link a Customer order and a member's order from which the Customer is provided with an allocation.[592] The Plan addresses this concern in the definition of an Allocation Report, which is a report that identifies accounts and subaccounts to which executed shares are allocated, but that is *not* required to be tied to a particular order or execution.[593] The Report is required to be submitted to the Central Repository,[594] but the lack of linkages in this case could make the resulting data less useful. Specifically, the content of the Allocation Report and the order lifecycles must contain content that permits regulators to draw certain conclusions about subaccount allocations even without a clean linkage.

While uncertainty about this issue remains, the Commission notes that the Plan's requirement for standardized Allocation Reports that consistently and uniquely identify Customers and reporters should improve the linkability of allocation information compared to current data, despite the limitation of direct linkage to order lifecycles, particularly in scenarios where potentially violative conduct is carried out by market participants operating through multiple broker dealers. This moderate improvement in the linkability of allocation data should improve regulators' ability to identify market participants who commit violations related to improper subaccount allocations.

(4) Customer and Reporter Identifiers

The Commission preliminarily believes that the inclusion of unique Customer and Reporter Identifiers described in the CAT NMS Plan would increase the accuracy of customer and broker-dealer information in data regulators use and provide benefits to a broad range of regulatory activities that involve audit trail data.

Currently, only a few data sources, which typically cover only a small portion of order lifecycles, include information regarding customers.[595] Further, the customer information in these data sources is often incomplete and inconsistent and the data is currently only obtainable by regulators making requests to broker-dealers directly. Additionally, although broker-dealer identifiers, in the form of MPID numbers, CRD numbers, and clearing broker numbers, appear within the current sources of audit trail data, because of the lack of a centralized database and because these identifiers may vary across exchanges, the Commission faces challenges in relying on these identifiers to accurately identify broker-dealer activity across the market.[596]

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[586] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 7.3. The Commission also notes that, even if all CAT Reporters provide the required linking information, the success of the linking process would depend in part on the approach taken by the Plan Processor and whether or not that approach results in errors.

[587] The CAT NMS Plan describes the Plan Processor's responsibility for creating the Technical Specifications. *See* CAT NMS Plan, *supra* note 3, at Section 6.9.

[588] The Commission notes that the Plan Processor is required to create a quality assurance testing environment in which, during industry-wide testing, the Plan Processor provides linkage processing of data submitted, the results of which are reported back to Participants and to the Operating Committee for review. *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 1.2. This may help identify challenges in the linking process and allow for their early resolution.

[589] The Commission understands that a large proportion of reports that fail OATS validation checks do so because of errors in the translation of the data by the OATS reporter.

[590] The Plan Processor is required to have policies and procedures, including standards, to ensure the accuracy of the consolidation by the Plan Processor of the data, per Rule 613(e)(4)(iii), which could mitigate errors as well. 17 CFR 242.613(e)(4)(iii).

[591] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(b).

[592] *See* Proposing Release, *supra* note 9, at 32576.

[593] *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[594] *See id.* at Section 6.4(d)(ii).

[595] *See* Section IV.D.2.b(1)A, *supra*. As discussed above, the Commission notes that SRO audit trails typically do not provide customer information but a recent FINRA rule change would require its members to report to OATS non-FINRA member customers who are broker-dealers. *See supra* note 407.

Rule 613 requires the use of a unique Customer-ID that identifies the Customer involved in CAT Reportable Events.[597] Based on a concern that requiring CAT Reporters to report a Customer-ID to the Central Repository with each order would disrupt existing business practices and that reporting on that basis could risk the leakage of order and Customer information into the market,[598] the Plan requires the Plan Processor to translate a unique Customer identifier assigned by the firm to its Customer (the Firm Designated ID) into the Customer-ID to be used in CAT.[599] Specifically, the Plan requires CAT Reporters to provide a Firm Designated ID for each Customer, which is defined as the unique identifier designated by the broker-dealer for each trading account for purposes of providing data to the Central Repository.[600] Upon receipt of the Firm Designated ID, the Plan Processor would be required to generate and associate one or more Customer-IDs for orders received by the Customer of the CAT Reporter, which would also be linked to the relevant Reportable Events for that Customer's order. Pursuant to the Plan, therefore, the Customer-ID would be generated from the Firm Designated ID,[601] and the Plan Processor would create a unique Customer-ID that would be consistent across that Customer's activity regardless of the originating broker-dealer.

To facilitate the creation of Customer-IDs, certain information would be submitted to the Central Repository. Specifically, broker-dealers would be required to submit an initial set of information identifying a Customer to the Central Repository, including the Firm Designated ID and the other biographical information associated therewith including, for an individual, name, address, date of birth, ITIN/SSN, and individual's role in the account (*e.g.,* primary holder, joint holder, guardian, trustee, person with power of attorney). With respect to legal entities, identifying information would include: name, address, EIN/LEI or other comparable common entity identifier.[602] Broker-dealers must also submit to the Central Repository daily updates for reactivated accounts, newly-established or revised Firm Designated IDs, or other associated reportable Customer information.[603] The Plan also calls for periodic refreshes of all Customer information from CAT Reporters.[604] And the Plan Processor must have a way to periodically receive full account lists (*i.e.,* not just the daily changes) to ensure the completeness and accuracy of the database.[605]

Based on this information, the Plan Processor has to "maintain information of sufficient detail to uniquely and consistently identify each Customer across all CAT Reporters, and associated accounts from each CAT Reporter." [606] It is the Plan Processor's responsibility to document and publish, with the approval of the Operating Committee, the minimum list of data elements needed to maintain this association. Appendix D sets forth a list of minimum data elements needed to identify each Customer across all CAT Reporters, and associated accounts within a CAT Reporter, including SSN or ITIN, date of birth, current name, current address, previous name and address; and for legal entities, the LEI (if available), tax identifier, full legal name, and address.[607] The Plan Processor must also support account structures that have multiple account owners and associated Customer information (*e.g.,* joint accounts, managed accounts), and must be able to link accounts that move from one CAT Reporter to another,[608] so it is possible that additional data fields would be necessary. Once a database is established, it must be maintained over time, and provide ready access to regulators to historical changes to that information.[609]

The Commission preliminarily believes that approval of the Plan would likely further remedy some of the inconsistencies and other limitations mentioned above. The Plan also contains provisions related to the accuracy of submitted Customer information. For example, a robust data validation process must be established for submitted Customer and Customer Account Information.[610] There must also be a robust error resolution process for Customer information. The Central Repository must be able to accommodate minor data discrepancies (*e.g.,* Road versus Rd in an address) on its own, while more substantial discrepancies (*e.g.,* two different persons with the same SSN) would need to be transmitted to the CAT Reporter for resolution within the established error correction timeframe.[611] While these elements should help increase the accuracy of Customer identification within CAT, there are some uncertainties, as the precise methods for submitting Customer data to the Central Repository, along with validations, are to be set out in Technical Specifications in the future.[612]

In addition to Customer-IDs, the CAT NMS Plan calls for the use of CAT-Reporter-IDs. The data to be reported to the Central Repository includes the SRO-assigned Market Participant Identifier (MPID) of the Industry Member or Participant receiving, routing, or executing the order.[613] Upon receipt of the data, the Plan Processor must map the SRO-assigned MPID to a CAT-Reporter-ID, which would be assigned by the Plan Processor in the CAT data.[614] Specifically, the Plan Processor must be able to assign a CAT-Reporter-ID to all reports submitted to the Central Repository based on SRO-assigned MPIDs. To the extent that the different Participants assign the same MPID to different CAT Reporters, the Plan Processor must be able to properly associate the correct SRO-assigned

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[596] *See* Section IV.D.2.b(1)D, *supra.*

[597] Rule 613(c)(7) specifies the event records that would contain the Customer-ID. 17 CFR 242.613(c)(7). Event records that do not explicitly capture the Customer-ID could be linked to a record that does contain this information, typically using the Order-ID.

[598] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1.(a)(iii).

[599] *Id.* The Firm Designated ID could be anything, provided that it is unique across the firm for a given business date.

[600] *See id.* at Section 6.3(d)(i)(A), n.2; *see also id.* at Section 1.1.

[601] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3.

[602] *See id.* at Appendix C, Section A.1.(a)(iii); *see also id.* at Appendix D, Section 9.1. The CAT NMS Plan further provides, in the definition of Customer Identifying Information, that where the LEI or other comparable common identifier is provided, information covered by such common entity identifier (*e.g.,* name, address) would not need to be separately submitted to the Central Repository. *Id.* at Section 1.1.

[603] *See id.* at Appendix C, Section A.1.(a)(iii).

[604] *See id.* at Appendix C, n.33 and Appendix D, Section 9.1.

[605] *See id.* at Appendix D, Section 9.1.

[606] *See id.* at Appendix C, Section A.1.(a)(iii).

[607] *See id.* at Appendix D, Section 9.1.

[608] *See id.*

[609] *See id.* at Article VI, Section 6.5(b) and (c).

[610] *See id.* at Appendix C, Section A.1.(a)(iii); *see also id.* at Appendix D, Section 9.1.

[611] *See id.* at Appendix D, Section 3.

[612] *See id.* at Appendix C, Section A.1.(a)(iii).

[613] *See* Exemption Order, *supra* note 18, at 11863–11865; CAT NMS Plan, *supra* note 3, at Sections 6.3(d), 6.4(d).

[614] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3.

MPIDs with the CAT Reporters.[615] To do this, the Plan Processor must develop and maintain a mechanism for assigning CAT-Reporter-IDs based on the relevant SRO-assigned identifier (MPID, ETPID, or trading mnemonic) currently used by CAT Reporters in their order handling and trading processes, and also to change those identifiers should that be necessary (*e.g.,* in the event of a merger), although changes are expected to be infrequent.[616] Moreover, the SROs would have an obligation to provide all their SRO-assigned MPIDs to the Central Repository on a daily basis to ensure the accuracy of the information used to assign the CAT-Reporter-ID. The Plan Processor must capture, store, and maintain this information in a master/reference database, similar to how the Plan Processor would handle symbology changes.[617] Finally, the validity of the SRO-assigned MPID is part of the initial file validation process upon receipt of a submission from a CAT Reporter, which should facilitate the accuracy of the Plan Processor's subsequent assignment of the CAT-Reporter-ID.[618]

The Commission preliminarily believes that the Customer-ID approach in the CAT NMS Plan would significantly improve the accuracy of customer information available to regulators. As noted above, existing data does not consistently capture information about the customers involved in a trade or other market event, which negatively affects the ability of regulators to accurately track customers' activities across broker-dealers. Additionally, customer identities in many existing data sources use inconsistent definitions and mappings across market centers. Accordingly, it is difficult for regulators to identify the trading of a single customer across multiple market participants.[619] The Customer-ID approach specified in the CAT NMS Plan constitutes a significant improvement because it would consistently identify the Customer responsible for market activity, obviating the need for regulators to collect and reconcile Customer identification information from multiple broker-dealers. This should reduce the risk of the introduction of errors into the data by regulators and save a significant amount of time.

Furthermore, the Commission preliminarily believes that the Reporter ID approach specified in the CAT NMS Plan would improve the accuracy of tracking information regarding entities with reporting obligations, namely broker-dealers and SROs. Because the Commission currently face challenges in using MPIDs and CRD numbers, for example, to identify broker-dealers across the market, the Plan's requirement for consistent unique Reporter IDs would eliminate the need for the Commission to reconcile broker-dealer information from multiple data sources, which can be a costly task for regulatory Staff that is often limited in terms of accuracy by the inconsistencies and non-uniqueness of current identifiers, and facilitate more efficient and effective regulatory activities that protect investors from harm. Moreover, because CAT Data would include more Industry Members in the Reporter ID category than are currently in any current set of broker-dealer identifiers, the Commission preliminarily believes that approval of the Plan would likely further remedy some of the inconsistencies and other limitations mentioned above.

(5) Aggregation

Most CAT Data would be disaggregated data, meaning that CAT Data would not suffer from the limitations that characterize some of the aggregated data sources that regulators must currently use. As mentioned in the Baseline Section, subaccount allocation data and issuer repurchase data exist in forms that are aggregated and thus these data sources are limited for use in certain regulatory activities and interests.[620] In particular, neither data type may necessarily indicate the individual executions. This data feature should promote more effective and efficient investigation by regulators of subaccount allocation issues and repurchase activity.

To meet the requirements of Rule 613, the CAT NMS Plan includes a required allocation reporting tool that would provide information on executions that are allocated to multiple subaccounts.[621] The Allocation Reports required by the Plan would provide the Firm Designated ID for any account(s), including subaccount(s) to which executed shares are allocated, the security that has been allocated, the *identifier of the firm reporting the allocation, the price per share* of shares allocated, the side of shares allocated, the number of shares allocated to each account, and the time of the allocation.[622] The Firm Designated IDs could facilitate linking back to the Customer-ID, so it may not be possible to perfectly link a Customer's aggregated orders, executions, and allocations for a day.[623]

The Commission preliminarily believes that the CAT NMS Plan would improve the accuracy of allocation data compared to existing data available to regulators. It would provide disaggregated information on the identity of the security, the number of shares and price allocated to each subaccount, when the allocation took place, and how each Customer subaccount is associated with the master account. This would more accurately reflect which Customer ultimately received the shares that were purchased in a particular trade.

The Commission anticipates that regulators may use CAT Data for some purposes that they use cleared data for now because CAT is significantly less aggregated. As discussed above, regulators often used equity and option cleared reports to identify market participants involved in trading activity relevant to an investigation.[624] Because these are aggregated, regulators can use them to identify clearing firms that may have higher volume in a particular stock on a particular day, but the data does not identify actual trades, and, therefore, regulators make data requests to access the underlying disaggregated data necessary to identify broker-dealers or customers that may be involved in the activity under investigation. If the CAT NMS Plan is approved, CAT Data could be used to identify individual trades and customers or other market participants who were involved in such activity with less delay and without requiring ad hoc data requests to clearing firms identified using equity or option cleared reports.

Likewise, the disaggregated issuer repurchase information that would be in the CAT data would be an improvement in the accuracy of information available to regulators about those issuer repurchases. In particular, the Plan would require that the Plan Processor link Customer information to the order lifecycle and the report would identify as Customers those issuers that are repurchasing their stock in the open market.[625] This would provide much more granular data than what is available currently for open market issuer repurchases, which consists of monthly aggregations of those issuer repurchases.[626]

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[615] *See id.*

[616] *See id.* at Appendix D, Section 10.1.

[617] *See id.* at Appendix D, Section 2 and Section IV.E.3.b, *infra.*

[618] *See id.* at Appendix D, Section 7.2.

[619] *See* Adopting Release, *supra* note 9, at 45730; *see also* Section III.D.2.b(2)D, *supra.*

[620] *See* Section IV.D.2.b.(2)E, *supra.* Item 703 of Regulation S–K requires issuers to report aggregated issuer repurchase data to the Commission on an annual and quarterly basis in Forms 10–K and 10–Q; *see also* 17 CFR 229.703 and *supra* note 451.

[621] *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(ii)(A)(1).

[622] *See* Exemption Order, *supra* note 18, at 11867.

[623] The Commission notes, however, that there may be allocations made by non-broker-dealers that are difficult to track if they involve multiple broker-dealers, or are not tracked if they involve non-CAT-reporters. *See* Exemptive Request Letter, *supra* note 16, at 26 n.61.

[624] *See* Section IV.D.2.a(2), *supra.*

c. Accessibility

In general, the Commission believes that the Plan, if approved, would substantially improve the accessibility of regulatory data by providing regulators with direct access to the consolidated CAT Data, including some data elements that currently take weeks or months to obtain. However, there is some uncertainty regarding the process for regulatory access under the Plan, which creates uncertainty as to the degree of the expected improvement.[627]

(1) Direct Access to Data

As discussed in the Baseline Section,[628] one of the significant limitations of current regulatory data sources is lack of direct access. Rule 613(e)(1) requires the Central Repository to store and make available to regulators data in a uniform electronic format and in a form in which all events pertaining to the same originating order are linked together in a manner that ensures timely and accurate retrieval of the information for all Reportable Events for that order.[629] Additionally, Rule 613(a)(1)(ii) requires that the CAT NMS Plan discuss the time and method of access by which the data would be made available to regulators.[630] The CAT NMS Plan implements this requirement in Section 6.5(c)[631] and further describes the direct access methods and functionality in the discussion of Consideration 2 and in Appendix D.[632] Section 6.5(c) requires that the Participants and the Commission have access to the Central Repository, and access to and use of the CAT Data stored at the Central Repository, and further requires a method of access to the data that provides for the ability to run searches and generate reports, including complex queries. Specifically, the Central Repository must store 6 years of CAT data in a "convenient and usable standard electronic format" that is "directly available and searchable electronically without any manual intervention by the Plan Processor."[633] This access to the Central Repository is solely for the purpose of performing regulatory functions and must include the ability to run searches and generate reports; further, the Plan requires that the Central Repository shall allow the ability to return results of queries that are complex in nature, including market reconstructions and the status of order books at varying time intervals.[634] The Central Repository must also maintain valid Customer and Customer Account Information and permit regulators access to "easily obtain historical changes to that information (*e.g.*, name changes, address changes)."[635]

The Commission recognizes that improving accessibility relative to the Baseline requires ensuring that enough SRO and Commission Staff members are able to use the direct access system supplied by the Central Repository when they need it. The ability to use the direct access system depends, among other things, on how user-friendly the system is, whether it has enough capacity for the expected use of the system, and whether it contains the functionality that the SROs and Commission Staff require. The Commission preliminarily believes that the minimum requirements for the direct access system would ensure that the Plan would improve on the Baseline of access to current data, including the process of requesting data.

Appendix D provides minimum functional and technical requirements that must be met by the Technical Specifications to facilitate these methods of access, including the methods of selecting data that must be supported, query and bulk extract performance standards, and formats in which data could be retrieved.[636] Specifically, CAT must be able to support a minimum of 3,000 regulatory users within the system, 600 of which might be accessing the system concurrently (which must be possible without an unacceptable decline in system performance)[637]: 20% of the 3,000 users would be daily or weekly users, and 10% would require advanced regulatory-user access.[638] Advanced user access includes the ability to run complex queries (versus basic users who may only run basic queries).[639]

Two types of query interfacing must be supported. The first, an online targeted query tool, must include a date or time range, or both, and allow users to choose from a broad menu of 26 pre-defined selection criteria (*e.g.*, data type, listing market, size, price, CAT-Reporter-ID, Customer-ID, or CAT-Order-ID), with more to be defined at a later date.[640] Results must be viewable in the tool or downloadable in a variety of formats and support at least a result size of 5,000 or 10,000 records, respectively, with a maximum result size to be determined by the Plan Processor.[641] The other method for regulator access to the data is a user-defined direct query or bulk extraction.[642] CAT must be able to support at least 3,000 daily queries, including 1,800 concurrently, and up to 300 simultaneous query requests with no performance degradation.[643] Datasets generated by these direct queries could run from less than 1 GB to at least 10 TB or more of uncompressed data.[644]

The actual method of query support is to be determined by the Plan Processor, but must provide an open API that allows use of regulator-supplied common analytic tools (*e.g.*, Python, Tableau) and ODBC/JDBC drivers.[645] The Plan Processor is permitted to define a "limited set of basic required fields (*e.g.*, date and at least one other field such as symbol, CAT-Reporter-ID, or CAT-Customer-ID)" that must be used by regulators in direct queries.[646] Direct queries must be able to be created, saved, and run by regulators (either directly or at a prescheduled time), with automated delivery of scheduled query results.[647] Finally, the Plan Processor must provide data models and data dictionaries for all processed and unlinked CAT Data, and the Plan Processor must provide procedures and training to regulators that would use the direct query feature (although it is up to the Plan Processor whether to require these training sessions).[648] Consideration was given to requiring the Plan Processor to create an online Report Center that would provide pre-canned reports (*i.e.*, recurring reports of interest to regulators), but due to the added complexity and lack of quantifiable use cases, the decision was made not to proceed. The Plan, however, provides that this decision would be reassessed when broker-dealers begin submitting data to the CAT.[649]

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[625] *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(iv).

[626] *See* Section IV.D.2.b(2)E, *supra* for baseline information on current issuer repurchase data.

[627] Accessibility refers to how the data is stored, how practical it is to assemble, aggregate, and process the data, and whether all appropriate regulators could acquire the data they need.

[628] *See* Section IV.D.2.b(3), *supra*.

[629] 17 CFR 242.613(e)(1).

[630] 17 CFR 242.613(a)(1)(ii).

[631] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(c).

[632] *See id.* at Appendix C, Section A.2(b) and (c), Appendix D, Section 8.

[633] *See id.* at Section 6.5(b)(i).

[634] *See id.* at Section 6.5(c)(ii), Appendix D, Section 8.1.

[635] *See id.* at Appendix C, Section A.1(a)(iii).

[636] *See id.* at Appendix D, Section 8; *see also* Appendix C, Section A.2.

[637] *See id.* at Appendix D, Section 8.1.

[638] *Id.*

[639] *See id.* at Appendix D, Section 8.1.1. Both Basic and Advanced Users may be established by an employee at the regulator designated to set up access to the system, if the Plan Processor chooses to do so versus processing it themselves. *See id.* at Appendix C, Section D.12(k). However, providing access to PII must always be done directly by the Plan Processor. *Id.*

[640] *See id.* at Appendix D, Section 8.1.1. This is a broad range of criteria from which to choose, although deferring additional selection fields to be defined at a later date makes the precise scope of this tool less certain.

[641] *See id.*

[642] *See id.* at Appendix D, Section 8.2.

[643] *See id.* at Appendix D, Section 8.2.1.

[644] *See* id.

[645] *See id.* at Appendix D, Section 8.2. A discussion of the types of data tools that bidders proposed to support can be found in Appendix C, Section A.2(b).

[646] *See id.* at Appendix D, Section 8.2.

[647] *See id.* at Appendix D, Section 8.2.1.

All queries must be able to be run against raw (*i.e.*, unlinked) or processed data, or both. A variety of minimum performance metrics apply to these queries.[650] The Plan Processor must also provide certain support to regulatory users. Specifically, it must "develop a program to provide technical, operational and business support" to regulators, including creating and maintaining the CAT Help Desk to provide technical expertise to assist regulators with questions and/or functionality about the content and structure of the CAT query capability.[651] The Help Desk must be available 24x7, support email and phone communication, and be staffed to handle 2,500 calls per month (although this resource would not be exclusive to regulators; CAT Reporters could use it as well).[652] The Plan Processor must also develop tools, including an interface, to let users monitor the status of their queries and/or reports, including all in-progress queries/reports and estimated time to completion.[653] In addition, the Plan Processor must develop communication protocols regarding system status, outages, and other issues affecting access, including access by regulators to a secure Web site to monitor CAT System status.[654] Furthermore, the Plan Processor must develop and maintain documentation and other materials to train regulators, including training on building and running queries.[655]

The Commission preliminary believes that the direct access facilitated by provisions of the CAT NMS Plan described above is reasonably designed to substantially reduce the number of ad hoc data requests and provide access to substantial data without the delays and costly time and knowledge investments associated with the need to create and respond to data requests. For example, regulators do not have direct access to EBS or trade blotter data and therefore they must request such data when needed for regulatory tasks. As a result, in 2014 the Commission made 3,722 EBS requests that generated 194,696 letters to broker-dealers for EBS data.[656] Likewise, the Commission understands that FINRA requests generate about half this number of letters. In addition, for examinations of investment advisers and investment companies, the Commission makes approximately 1,200 data requests per year. If the Plan is approved, the Commission preliminarily believes that the number of data requests would decline sharply. In addition to decreasing the amount of time currently required for regulators to access data sources, direct access to the CAT Data should decrease the costs that many regulators and market participants incur in either requesting data or fulfilling requests for data, such as the time and resources that regulators and data liaisons or back office IT staff at broker-dealers expend to understand and access broker-dealer data collected and provided in a particular way.

The Plan would also permit regulators to directly access customer information, which could improve the ability of SROs to conduct surveillance. Rule 613(e)(3) requires that the CAT provide the capability to run searches and generate reports.[657] The CAT NMS Plan indicates that regulators would be able to run searches on many variables, including Customer-IDs.[658] Appendix D further clarifies that both the online targeted query tool and the user-defined query/bulk extract process would produce records that provide Customer-IDs, but that do not themselves provide Customer PII data.[659] Data containing PII, however, could be obtained by regulatory personnel specifically authorized to obtain PII access, through a process to be documented by the Plan Processor.[660] Currently, most regulatory data sources do not directly link to specific customers.[661] Instead, regulators can use an ad-hoc data request to identify the customer and follow up with an EBS request to identify the customer's other activity across market participants. In this regard, CAT would provide SROs with direct access to the data that is necessary to conduct surveillance of the trading behavior of individual market participants in a more timely fashion.[662]

(2) Consolidation of Data

The Commission also preliminarily believes that, if approved, the Plan would improve accessibility by consolidating various data elements into one combined source, reducing data fragmentation. First, Rule 613 requires that the Central Repository collect data that includes the trading and routing of a given security from all CAT Reporters.[663] Currently, audit trail data for securities that are traded on multiple venues (multiple exchanges or off-exchange venues) is fragmented across multiple data sources, with each regulator generally having direct access only to data generated on the trading venues it regulates.[664] If approved, the Plan would bring audit trail data related to trading on all venues into the Central Repository where it could be accessed by all regulators. Second, Rule 613 requires that the Plan include both equity and options data.[665] Currently no existing regulatory audit trail data source includes both options and equities data, so collecting this data and providing access would allow regulators to monitor and run surveillance on the activity of market participants in related instruments, such as when a market participant has activity in both options and the options' underlying assets.

The Plan would also marginally increase the accessibility of historical exchange data. In particular, Section 6.5(b)(i) of the Plan requires that the Central Repository make historical data available for not less than six years, in a manner that is directly accessible and searchable electronically without manual intervention by the Plan Processor.[666]

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[648] *See id.* at Appendix D, Section 8.2.

[649] *See id.* at Appendix D, Section 8.2.2.

[650] *See* Section IV.E.1.IV.E.1.d(3), *infra*, for additional for additional information.

[651] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 10.2.

[652] *See id.* at Appendix D, Section 10.3.

[653] *See id.* at Appendix D, Section 10.2.

[654] *See id.*

[655] *See id.*

[656] *See* Section IV.D.2.b(2), *supra*, for discussion of ad hoc data requests.

[657] 17 CFR 242.613(e)(3).

[658] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 8.2; *See also supra* note 632.

[659] *See id.* at Appendix D, Section 4.1.6, Appendix D, Section 8.1.1–8.1.3.

[660] *See id.* at Appendix D, Section 4.1.6.

[661] The EBS system, trade blotters, order tickets, and trade confirmations are the existing data sources that contain customer information. *See* Section IV.D.2.b(1)A, *supra;* Adopting Release, *supra* note 9, at 45727. Also a recent FINRA rule change would require FINRA members to report to OATS non-FINRA member customers who are broker-dealers. *See supra* note 407.

[662] Currently, FINRA receives exchange data from SROs at the end of the trading day. It takes approximately three days for FINRA to process and translate this data to a common format before surveillance programs can run. As noted in Section IV.D.1.c, this economic analysis considers surveillance to be SROs running automated processes on routinely collected or in-house data to identify potential violations of rules or regulations.

[663] *See* 17 CFR 242.613(c).

[664] The Commission recognizes that FINRA collects data from exchanges for which it provides regulatory services. However, this data is sent to FINRA by the exchanges with a delay, and the data formats are not standardized prior to receipt at FINRA.

[665] *See* 17 CFR 242.613(c)(5), (c)(6).

In some dimensions of accessibility, the Commission notes that uncertainties exist that could affect the degree of expected improvement to accessibility. In particular, while the Plan provides detail on the method of access and the types of queries that regulators could run, many of the decisions regarding access have been deferred until after the Plan Processor is selected and finalizes the Technical Specifications; the Plan does not specify how regulators would access the data beyond providing for both an online query tool and user-defined direct queries that could do bulk extractions.[667] For example, while the Plan indicates that regulators would have an on-line targeted query tool and a tool for user-defined direct queries or bulk extraction,[668] the Plan itself does not provide an indication for how user-friendly the tools would be or the particular skill set needed to use the tools for user-defined direct queries.

In addition, it is not known whether the Plan Processor would host a server workspace that regulators could use for more complex analyses, what software tools would be available to regulators within such a workspace, and whether complex analyses would be able to be performed without extracting significant data from the Central Repository's database.

While all Bidders included certain baseline functionality, such as some means for regulators to perform dynamic searches, data extraction, and "off-line analysis," [669] Bidders proposed using a variety of tools to provide regulators with access to and reports from the Central Repository, including direct access portals, web-based applications, and a number of different options for formatting the data provided to regulators in response to their queries.[670] While all of these proposed solutions would presumably be compatible with achieving the accessibility benefits sought to be achieved through the Plan—*i.e.,* they would all involve the aggregation of data from various sources and the provision of ready access to that data for regulators—the precise degree of functionality of the final system is still to be determined. Similarly, the details of system performance would depend on Service Level Agreements to be established between the Plan Participants and the eventual Plan Processor, which means that the details would not be known until after the Plan Processor is selected.[671] These functionality and performance uncertainties create some uncertainty regarding the degree of improvement in regulatory access that would result from the Plan.

Nonetheless, the requirements included in the Plan describe a system that, once implemented, would result in the ability to query consolidated data sources that represents a significant improvement over the currently available systems. This substantial reduction in data delays and costly data investments would permit regulators to complete market reconstructions, analyses, and research projects, as well as investigations and examinations, more effectively and efficiently and would lead to improved productivity in the array of regulatory matters that rely on data, which should lead to improved investor protection.

d. Timeliness

The Commission believes that, if approved, the CAT NMS Plan would significantly improve the timeliness of the reporting, compiling, and access of regulatory data, which would benefit a wide array of regulatory activities that use or could use audit trail data.[672] The Commission preliminarily believes that the timeline for compiling and reporting data pursuant to the Plan constitutes an improvement over the processes currently in place for many existing data sources, and relative to some data sources the improvement is dramatic. Specifically, under the Plan, CAT Data would be compiled and made ready for access faster than is the case today for some data, both in raw and in corrected form; regulators would be able to query and manipulate the CAT Data without going through a lengthy data request process; and the data would be in a format to make it more immediately useful for regulatory purposes.

(1) Timing of Initial Access to Data

The Plan would require CAT Reporters to report data to the Central Repository at times that are on par with current audit trails that require reporting, but the Central Repository would compile the data for initial access sooner than some other such data.[673] Sections 6.3(b)(ii) and 6.4(b)(ii) of the Plan require that the data required to be collected by CAT Reporters must be reported to the Central Repository by 8:00 a.m. Eastern Time on day T+1.[674] These provisions also make clear that CAT Reporters could voluntarily report the required data prior to the deadline.[675] As described in Table 4, the time at which data is reported often differs significantly from the time at which data is made available to various regulators.[676] The CAT Data would be made available to regulators in raw form after it is received from reporters and passes basic formatting validations; the Plan does not specify exactly when these validations would be complete, but the requirement to link records by 12:00 p.m. (noon) Eastern Time on day T+1 gives a practical upper bound on this timeline for initial access to the data.[677] Thus, to the extent that access to the raw (*i.e.,* uncorrected and unlinked) data would be useful for regulatory purposes, the CAT NMS Plan provides a way for SROs and the Commission to access the uncorrected and unlinked data on day T+1 by 12:00 p.m. at the latest.

As noted in the Baseline, some current data sources compile and report the data with delays. For example, equity and option clearing data are not compiled and reported to the NSCC and OCC until day T+3, and thus access to this data by the Commission cannot occur until day T+3 at the very soonest. Under the Plan, raw data would be available two days sooner to all regulators. In other cases such as EBS reports, the data are not compiled and reported to a centralized database until a request is received.[678] OATS data is initially reported to FINRA by 8 a.m. on the calendar day following the reportable event, and it takes approximately 24 hours for FINRA to run validation checks on the file.[679] However, SROs do not currently access OATS information for regulatory purposes until *after* the error correction process is complete, which imposes a further delay of several business days for non-FINRA SRO regulators' use.[680] Uncorrected OATS data is, however, available at 8 a.m. on the calendar day following the reportable event to FINRA (several hours more timely than CAT Data would be)—and is available to other regulators upon request several weeks later.[681] Uncorrected CAT Data would be available to all regulators at 12:00 p.m. on day T+1, which is at least several days sooner than OATS is available to non-FINRA regulators; however, the Commission notes that because OATS is reportable on the calendar day following the OATS-reportable event while CAT would be reported on T+1 following a Reportable Event, regulators' access to CAT Data from a day preceding a non-trading day (Fridays or days before market holidays) is likely to be less timely than it is currently, if that data would be covered by OATS. However, to the extent that the CAT would generally make CAT Data, which would include substantially more information than OATS data, available to all regulators, as opposed to just FINRA, in raw form by at least 12:00 p.m. Eastern Time on day T+1, the CAT would generally represent a significant improvement in timeliness for SROs other than FINRA compared to OATS.

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[666] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(b)(i). Currently, broker-dealers retain data for six years, but exchanges are only required to retain data for five years. In practice, the Commission understands that most exchanges generally retain data for at least six years, but at least one exchange does not retain data for six or more years. Therefore, the CAT NMS Plan would improve the historical data available from at least one exchange.

[667] *See, e.g.,* CAT NMS Plan, *supra* note 3, at Appendix D, Section 8.2.

[668] *See* CAT NMS Plan, *supra* note 3 at Appendix D, Sections 8.1.1, 8.1.2.

[669] *See id.* at Appendix C, Section A.2(b). "Offline-analysis" refers to a regulator's analysis of data extracted from the Central Repository using the regulator's own analytical tools, software, and hardware to perform the analysis. *See id.* at Appendix C, Section A.2(b) n.77.

[670] *See id.* at Appendix C, Section A.2(b).

[671] *See id.* at Appendix D, Section 8.5.

[672] Timeliness refers to when the data is available to regulators and how long it would take to process before it could be used for regulatory analysis.

[673] Compiling data refers to a process that aggregates individual data records into a data set. This could occur when regulators request data and when the regulators receive data from multiple providers. This is different from the act of reporting data.

[674] *See* Rules 613(c)(3), (c)(4), 17 CFR 242.613(c)(3), (c)(4).

[675] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3.1.

[676] *See* Table 4, *supra.*

[677] *See* CAT NMS Plan *supra* note 3, at Appendix C, Section A.2(a); Appendix C, Section A.3(e); Appendix D, Section 6.1.

It is true that the Plan would not necessarily improve the timeliness of audit trail data in every case or for every regulator, as some kinds of audit trail data are currently timely for some regulators. For example, exchange SROs already have real-time access to their own audit trail data.[682] However, regulators at other SROs or the Commission do not have real-time access to that exchange's audit trail, and therefore CAT Data could be more timely for these other regulators to access and use than obtaining that exchange's audit trail data through any means.[683]

(2) Timeliness of Access to Error-Corrected Data

Further, the Commission preliminarily believes that the error correction process required by the CAT NMS Plan is reasonably designed to provide additional improvements in timeliness for corrected data. The CAT NMS Plan specifies that the initial data validation and communication of errors to CAT Reporters must occur by noon on day T+1, corrections of these errors must be submitted by the CAT Reporters to the Central Repository by 8:00 a.m. Eastern Time on day T+3, and the corrected data made available to regulators by 8:00 a.m. Eastern Time on day T+5.[684] During this interim time period between initial processing and corrected data availability, "all iterations" of processed data must be available for regulatory use.[685] The Central Repository must be able to receive error corrections at *any* time, even if late; [686] if corrections are received after day T+5, the Plan Processor must notify the SEC and SROs of this fact and how re-processing of the data (to be determined in conjunction with the Operating Committee) would be completed.[687] Customer information (*i.e.*, information containing PII) is processed along a slightly different timeline, but the outcome—corrected data available by 8:00 a.m. Eastern Time on day T+5—is the same.[688] One exception to this timeline is if the Plan Processor has not received a significant portion of the data, as determined according to the Plan Processor's monitoring, in which case the Plan Processor could determine to halt processing pending submission of that data.[689]

As discussed in the Baseline Section, the error resolution process for OATS is limited to five business days from the date a rejection becomes available.[690] The CAT NMS Plan requires a three-day repair window for the Central Repository.[691] Accordingly, if the Plan is approved, regulators would generally be able to access partially and fully corrected data earlier than they would for OATS.[692]

(3) Timeliness of direct access

Improvements to timeliness would also result from the ability of regulators to directly access CAT Data.[693] As noted in the Baseline Section and throughout this Section, most current data sources do not provide direct access to most regulators, and data requests can take as long as weeks or even months to process. Other data sources provide direct access with queries that can sometimes generate results in minutes—for example, running a search on all MIDAS message traffic in one day can take up to 30 minutes [694]—but only for a limited subset of the data to be available in CAT, and generally only for a limited number of regulators. Accordingly, the Commission preliminarily believes that the ability of regulators to directly access and analyze the scope of audit trail data that would be stored in the Central Repository should reduce the delays that are currently associated with requesting and receiving data. For many purposes, therefore, CAT Data could be up to many weeks more timely than current data sources. Furthermore, direct access to CAT Data should reduce the costs of making ad hoc data requests, including extensive interactions with data liaisons and IT staff at broker-dealers, SROs, and vendors, developing specialized knowledge of varied formats, data structures, and systems, and reconciling data.

As discussed above, Rule 613 generally requires that the Central

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[678] The Commission notes, however, that broker-dealers could compile some data sources discussed in the baseline on the day of an event. For example, broker-dealers can compile trade blotters on the same day as the trade. Further, regulators can compile data received in real-time on the event day. For example, regulators can compile direct data feeds same day. The Commission does not believe the CAT NMS Plan would affect the timing of the compilation of such data, nor would it reduce the number of requests for data on the day of an event.

[679] *See* Adopting Release, *supra* note 9, at 45729.

[680] *Id.*

[681] *See* OATS Reporting Technical Specifications Section 8.1, *available at https://www.finra.org/sites/default/files/OATSTechSpec_01112016.pdf.*

[682] Under the Plan, SROs that are exchanges would still have the same real-time access to their own audit trail data as they currently do. The Commission does not expect that all SRO audit trails will be retired on implementation of the Plan because exchanges may use such audit trails to implement their CAT reporting responsibilities. CAT reporting requirements would require that exchanges collect and report audit trail information from their systems even if they elect to replace their current audit trails. However, CAT requirements may improve the completeness of real-time exchange audit trail data if the information that exchanges collect under the Plan is more complete than what they currently collect.

[683] As noted, the SROs are generally currently able to access their own audit trail data on the same day of an event and the Commission is currently able to access some public data, like SIP and MIDAS, on the same day as an event. Further, OATS is available to FINRA at 8am on the day following an event. The Commission preliminarily does not expect the CAT NMS Plan would affect these regulators' access to most of these respective data sources.

[684] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.2(a), Appendix D, Section 6.1.

[685] *Id.* at Appendix D, Section 6.2.

[686] *See id.* at Appendix C, Section A.3.(b), Appendix D, Section 7.4.

[687] *See id.* at Appendix D, Section 6.2.

[688] *Id.*

[689] *See id.* at Appendix D, Section 6.1.

[690] *See* Section IV.D.2.b(4) and *supra* note 465.

[691] *Id.* at Appendix C, Section A.2(a).

[692] CAT Data being available on day T+5 may be later than for other current SRO audit trails.

[693] *See* CAT NMS Plan, *supra* note 3, Section 6.5(c).

[694] *See* Section IV.D.2.b(4) and *supra* note 468.

Repository would receive, consolidate, and retain CAT Data in a linked uniform electronic format and the regulators would be able to directly access the data stored in the Central Repository.[695] Queries take time to return data because they need to look up information across a range of data records, process that data, and compile it into an output dataset. Therefore, the improvements to timeliness depend on how long the queries take to return data. The CAT NMS Plan specifies that regulators would be able to query the Central Repository using an online targeted query tool with response times "measured in time increments of less than a minute" for targeted queries and within 24 hours for large or complex queries that either scan large amounts of data or return large result sets (*i.e.*, sets of over 1 million records).[696] That said, if the data request is limited to one business date, and that business date is within the last 12-month period, the query must not take more than 3 hours to run, regardless of complexity.[697] Specifically, searches including only equities and options trade data must be returned within either 1 minute (events for a specific Customer or CAT Reporter with filterable other fields); 30 minutes (events for a specific Customer or CAT Reporter in a specified date range of less than 1 month); or 6 hours (events for a single Customer or CAT Reporter in a specified date range of up to 12 months within the last 24 months).[698] Searches including equities and options trade data, along with NBBO data, must return within 5 minutes for all orders for a specific security from a specific Participant; and for all orders, cancellations, and NBBO (or the protected best bid and offer) for a specific security, and with several similar types of searches, within a specified window not to exceed 10 minutes for a single date.[699]

Furthermore, the search tool must include a resource management component, which could manage query requests to balance the workload, and categorize and prioritize query requests based on the input parameters, complexity of the query, and the volume of data to be parsed in the query, with the details on the prioritization plan to be provided at a later date.[700] The database must support the estimated 600 concurrent users to ensure that there is not an unacceptable decline in system performance.[701] The direct query and bulk extract features are also designed to ensure timely regulatory access to critical data. For example, the bulk extract of an entire day's worth of data should be able to be transferred in less than four hours (assuming the regulator's network could support the required data transfer speeds).[702] The Plan Processor must have an automated mechanism to monitor user-defined direct queries and bulk data extracts, including automated alerts of issues with bottlenecks and excessively long queues for queries or data extractions.[703] Monthly reporting on the delivery and timeliness of these tools to the Operating Committee and regulators is required.[704]

(4) Timeliness of use of Data

The Commission also preliminarily expects the CAT NMS Plan to reduce the time required to process data before analysis. Currently regulators can spend days and up to months processing data they receive into a useful format.[705] Part of this delay is due to the need to combine data across sources that could have non-uniform formats and to link data about the same event both within and across data sources. As discussed above, these kinds of linking processes can require sophisticated data techniques and substantial assumptions, and can result in imperfectly linked data. The Plan addresses this issue by stating that the Plan Processor must store the data in a linked uniform format.[706] Specifically, the Central Repository will use a "daisy chain" approach to link and reconstruct the complete lifecycle of each Reportable Event, including all related order events from all CAT Reporters involved in that lifecycle.[707] Therefore, regulators accessing the data in a linked uniform format would no longer need to take additional time to process the data into a uniform format or to link the data.[708] Accordingly, the Commission preliminarily believes that the Plan would reduce or eliminate the delays associated with merging and linking order events within the same lifecycle. Further, the Plan would improve the timeliness of FINRA's access to the data it uses for much of its surveillance by several days because the corrected and linked CAT Data would be accessible on T+5 compared to FINRA's T+8 access to its corrected and linked data combining OATS with exchange audit trails.

The expected improvements to data accuracy discussed above could also result in an increase in the timeliness of data that is ready for analysis, although uncertainty exists regarding the extent of this benefit.[709] As noted in the Baseline, regulators currently take significant time to ensure data is accurate beyond the time that it takes data sources to validate data. In some cases, data users may engage in a lengthy iterative process involving a back and forth with the staff of a data provider in order to obtain accurate data necessary for a regulatory inquiry. Accordingly, to the extent that the Central Repository's validation process is sufficiently reliable and complete, the duration of the error resolution process regulators would perform with CAT Data may be shorter than for current data. Further, to the extent that the Central Repository's linking and reformatting processes are sufficiently successful, the SROs and Commission may not need a lengthy process to ensure the receipt of accurate data. However, as discussed above, the Commission lacks sufficient information on the validations, linking, and reformatting processes needed to draw a strong conclusion as to whether users would take less time to validate CAT Data than they take on current data.[710] Nonetheless, the Commission preliminarily believes that the linking and reformatting processes at the Central Repository would be more accurate than the current decentralized processes such that it would reduce the time that regulators spend linking and reformatting data prior to use.

2. Improvements to Regulatory Activities

The Commission preliminarily believes that improvements in the quality of available data have the potential to result in improvements in the analysis and reconstruction of market events; market analysis and research in support of regulatory decisions; and market surveillance, examinations, investigations, and other enforcement functions.

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[695] *See* Section IV.E.1.c, *supra*.

[696] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.2(c); Appendix D, Section 8.1.2.

[697] *Id.* at Appendix D, Section 8.1.2.

[698] *Id.*

[699] *Id.*

[700] *See id.* at Appendix D, Section 8.1.2.

[701] *See id.* at Appendix D, Section 8.1.

[702] *See id.* at Appendix D, Section 8.2.2.

[703] *Id.*

[704] *Id.*

[705] *See* Section IV.D.2.b(4), *supra*.

[706] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(b)(i). The CAT NMS Plan does not link allocations to order events; *see also* 17 CFR 242.613(e)(1).

[707] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3.

[708] This does not apply if regulators choose to access raw data before the Central Repository processed them.

[709] *See* Section IV.E.1.b, *supra*.

[710] As discussed above, Rule 613 requires a validation process but leaves significant flexibility on the specific validations to be performed and the timeline for validation. The details regarding required validations do not appear in the CAT NMS Plan and instead would appear in the Technical Specifications, which would not be finalized until after approval of the CAT NMS Plan. *See* Section IV.E.1.b, *supra*.

Regulators' abilities to perform analyses and reconstructions of market events would likely improve, allowing regulators to more quickly and thoroughly investigate these events. This would allow regulators to provide investors and other market participants with more timely and accurate explanations of market events, and to develop more effective responses to such events. The availability of the CAT Data would benefit market analysis and research in support of regulatory decisions, facilitating an improved understanding of markets and informing potential policy decisions. Regulatory initiatives that are based on an accurate understanding of underlying events and are narrowly tailored to address any market deficiency should improve market quality and benefit investors.

In the Commission's preliminary view, CAT Data would substantially improve both the efficiency and effectiveness of SRO broad market surveillance programs, which could benefit investors and market participants by allowing regulators to more quickly and precisely identify and address a higher proportion of market violations that occur, as well as prevent violative behavior through deterrence.

The Commission also preliminarily believes that CAT Data would enhance the SROs' and the Commission's abilities to effectively target risk-based examinations of market participants who are at elevated risk of violating market rules, as well as their abilities to conduct those examinations efficiently and effectively, which could also contribute to the identification and resolution of a higher proportion of violative behavior in the markets. The reduction of violative behaviors in the markets should benefit investors by providing investors with a safer environment for allocating their capital and making financial decisions. A reduction in violative behaviors could also benefit market participants whose business activities are harmed by the violative behavior of other market participants. The Commission further believes that more targeted examinations could also benefit market participants by resulting in proportionately fewer burdensome examinations of compliant market participants. A significant percentage of Commission enforcement actions involve trade and order data,[711] and the Commission also preliminarily believes that CAT Data would significantly improve the efficiency and efficacy of enforcement investigations, including insider trading and manipulation investigations.

The Commission further anticipates additional benefits associated with enhanced abilities to handle tips, complaints and referrals, and improvements in the speed with which they could be addressed, particularly in connection with the significant number of tips, complaints, and referrals that relate to manipulation, insider trading, or other trading and pricing issues.[712] The benefits to investor protection of an improved tips, complaints, and referrals system would largely mirror the benefits to investor protection that would accrue through improved surveillance and examinations efficiency.

a. Analysis and Reconstruction of Market Events

The Commission preliminarily believes that, if approved, the Plan would improve regulators' ability to perform analysis and reconstruction of market events. As noted in the Adopting Release, the sooner regulators can complete a market reconstruction, the sooner regulators can begin reviewing an event to determine what happened, who was affected and how, if any regulatory responses might be required to address the event, and what shape such responses should take.[713] Furthermore, the improved ability for regulators to generate prompt and complete market reconstructions could provide improved market knowledge, which could assist regulators in conducting retrospective analysis of their rules and pilots.

The fragmented nature of current audit trail data and the lack of direct access to such data renders market reconstructions cumbersome and time-consuming. Currently, the information needed to perform these analyses is spread across multiple audit trails, with some residing in broker-dealer order systems and trade blotters. Requesting the data necessary for a reconstruction of a market event often takes weeks or months and, once received, regulators then need weeks to reconcile disparate data formats used in different data sources. For example, on the afternoon of May 6, 2010, the U.S. equity and equity futures markets experienced a sudden breakdown of orderly trading when indices, such as the Dow Jones Industrial Average Index and the S&P 500 Index, fell about 5% in five minutes, only to rebound soon after (the "Flash Crash").[714]

The lack of readily available trade and order data resulted in delays and gaps in the Commission's analysis of the events of the Flash Crash. Ultimately, it took Commission Staff nearly five months to complete an accurate representation of the order books of the equity markets for May 6, 2010.[715] Even then, the reconstruction only contained an estimated 90% of trade and order activity for that day.

Regulators, such as the Commission and SROs on whose exchanges events took place, faced similar challenges when reconstructing events around the May 2012 Facebook IPO, the August 2012 Knight Securities "glitch," and the August 2013 NASDAQ SIP outage.[716] In addition, during the financial crisis in 2008, the lack of direct access to audit trail data resulted in the Commission being unable to quickly and efficiently conduct analysis and reconstruction of market events. The state of OATS data in 2008 also limited FINRA's ability to analyze and reconstruct the market during the financial crisis because FINRA could not yet augment its OATS data with exchange data and OATS did not include market maker quotations. As a result, regulators had little information about the role of short sellers in market events and the identity of short sellers during the financial crisis, for example.[717] Some of these shortcomings in regulatory data still apply today.[718]

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[711] In 2015, the Commission filed 807 enforcement actions, including 39 related to insider trading, 43 related to market manipulation, 124 related to broker-dealers, 126 related to investment advisers/investment companies, and one related to exchange or SRO duties. In 2014, the Commission filed 755 enforcement actions, including 52 related to insider trading, 63 related to market manipulation, 166 related to broker-dealers, and 130 related to investment advisers/investment companies, many of which involved trade and order data. *See* Year-by-Year SEC Enforcement Statistics, *available at https://www.sec.gov/news/newsroom/images/enfstats.pdf.* The total number of actions filed is not necessarily the same as the number of investigations. An investigation may result in no filings, one filing, or multiple filings. Additionally, trade and order data may be utilized in enforcement investigations that do not lead to any filings. Based on these numbers, the Commission estimates that 30–50% of its enforcement actions incorporate trading or order data. A portion of FINRA's 1,397 disciplinary actions in 2014 and 1,512 in 2015 also involved trading or order data. *See http://www.finra.org/newsroom/statistics.*

[712] In fiscal years 2014 and 2015, the Commission received around 15,000 entries in its TCR system, approximately one third of which related to manipulation, insider trading, market events, or other trading and pricing issues.

[713] *See* Adopting Release, *supra* note 9, at 45732.

[714] *See* CFTC and SEC, Findings Regarding the Market Events of May 6, 2010: Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues (September 30, 2010), *available at http://www.sec.gov/news/studies/2010/marketevents-report.pdf.*

[715] For a further explanation of the limitations data deficiencies imposed on the Commission's investigation into the Flash Crash, *see* Adopting Release, *supra* note 9, at 45732–33.

[716] For background information on these events, *see* SEC Press Release, SEC Charges NASDAQ for Failures During Facebook IPO (May 29, 2013), *available at http://www.sec.gov/News/PressRelease/Detail/PressRelease/1365171575032; In the Matter of Knight Capital Americas LLC,* Securities Exchange Release Nos. 70694 (October 16, 2013); 73639 (November 19, 2014), 79 FR 72252, 72255, n.32 (December 5, 2014) (discussing NASDAQ SIP outage); *see also* Adopting Release, *supra* note 9, at 45732–33 (discussing difficulty of analyzing and reconstructing market events in absence of a consolidated audit trail).

More generally, regulators face significant difficulties in using some current data sources for a thorough market reconstruction. Some of the most detailed data sources, including sources like EBS and trade blotters that identify customers, are impractical for broad-based reconstructions of market events. In particular, including EBS data for a reconstruction of trading in the market for even one security on one day could involve many, perhaps hundreds, of requests, and would require linking that to SRO audit trail data or public data.[719] Further, because EBS data lacks time stamps for certain trades,[720] use of EBS data in market reconstructions requires supplementation with data from other sources, such as trade blotters.

The Commission therefore expects that improvements in data completeness and accuracy from the Plan would enhance regulators' ability to perform analyses and to reach conclusions faster in the wake of a market event by reducing the time needed to collect, consolidate and link the data. The inclusion of Customer-IDs and consistent CAT-Reporter-IDs in CAT would allow regulators to more effectively and efficiently identify market participants that submit orders through several broker-dealers and execute on multiple exchanges and whose activity may warrant further analysis. This would be useful if regulators were interested in determining if a particular trader or category of traders had some role in causing the market event, or how they might have adjusted their behavior in response to the event, which could amplify the effects of the root cause or causes. Furthermore, the clock synchronization requirements of the Plan would improve the ability of regulators to sequence some events that happened in different market centers to better identify the causes of market events. Overall, the Commission preliminarily believes that, if the Plan is approved, regulators would have dramatically improved ability to identify the market participants involved in market events.

The Commission further believes that better data accessibility would significantly improve the ability of regulators to analyze and reconstruct market events. As noted above, CAT Data would improve data accessibility relative to every other data source because all SROs and the Commission would have direct access to CAT Data. If the Plan is approved, much of this information would be housed in the Central Repository with query capabilities that would allow regulators to access raw data beginning the day after an event.[721] Further, as mentioned below in the SRO Surveillance Section, the CAT Data would link Reportable Events, which could allow regulators to respond to market events more rapidly because they would not need to process corrected and linked data before starting their analyses.[722]

b. Market Analysis and Research

The Commission preliminarily believes that the CAT NMS Plan would benefit the quality of market analysis and research that is produced to increase regulatory knowledge and support policy decisions and would lead to a more thorough understanding of current markets and emerging issues. These expected benefits would stem from improvements in accessibility, accuracy, and completeness of regulatory data. Improvements in regulatory market analysis and research aimed at informing regulatory decisions would benefit investors and market participants by improving regulators' understanding of the intricacies of dynamic modern markets and how different market participants behave in response to policies and information. These more nuanced and more thorough insights would help regulators to identify the need for regulation that specifically tailors policies and interventions to the diverse landscape of market participants and conditions that characterize current financial markets, as well as assist them in conducting retrospective analysis of their rules and pilots.

A lack of direct access to necessary data, along with inaccuracies in the data that are available, currently limits the types of analyses that regulators can conduct. These data limitations constrain the information available to regulators when they are considering the potential effects of regulatory decisions. For example, in January 2010 the Commission published a concept release on equity market structure that discusses how the markets have rapidly evolved from trading by floor-based specialists to trading by high-speed computers.[723] The concept release poses a number of questions about the role and impact of high-frequency trading strategies and the movement of trading volume from the public national securities exchanges to over-the-counter trading venues such as dark pools. Over the past five years there has been considerable discussion about these topics by regulators, market participants, the media, and the general public. Nevertheless, limitations in the completeness and accessibility of the available data have limited the research that followed the concept release.

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[717] *See* Short Sale Reporting Study, *supra* note 413. To resolve this lack of information, the Commission issued an emergency order creating a new filing requirement for 13f filers to report their short positions and short sales to the Commission weekly on Form SH. *See* former Rule 10a–3T; *available at http://www.sec.gov/rules/other/2008/34-58591.pdf*; *http://www.sec.gov/rules/other/2008/34-58591a.pdf*; *http://www.sec.gov/rules/other/2008/34-58724.pdf*; *http://www.sec.gov/rules/final/2008/34-58785.pdf*; *http://www.sec.gov/news/press/2008/2008-209.htm*; *http://www.sec.gov/divisions/marketreg/shortsaledisclosurefaq.htm.* This data was kept confidential. After evaluating whether the benefits from the data justified the costs, the Commission let this requirement expire, replacing it with additional public data. *See* SEC Press Release, SEC Takes Steps to Curtail Abusive Short Sales and Increase Market Transparency (July 27, 2009), *available at http://www.sec.gov/news/press/2009/2009-172.htm.* This public data did not identify the short sellers as the Form SH data did. In addition, using data requested from SROs, the Commission conducted two studies on short selling during September 2008. These studies required data requests to select exchanges, took two months to complete and did not have information identifying short sellers. *See* "Analysis of a Short Sale Price Test Using Intraday Quote and Trade Data" *available at http://www.sec.gov/comments/s7-08-09/s70809-368.pdf* and "Analysis of Short Selling Activity during the First Weeks of September 2008" *available at http://www.sec.gov/comments/s7-08-09/s70809-369.pdf.*

[718] For example, OATS still does not include all principal orders or option data. *See* Section IV.D.2.b(1)A, *supra.* Because FINRA collects some exchange data, FINRA is able to merge exchange quotes with OATS.

And although there is a proposed FINRA rule that will require FINRA members to report to OATS identification for their non-FINRA member customers who are broker-dealers, even after approval of this rule OATS will lack identification for customers who are not broker-dealers. *See* Section IV.D.2.b(1)B, *supra.*

[719] *See* Section IV.D.2.b(3), *supra* (noting that in 2014, the SEC made 3,722 EBS requests which generated 194,696 letters to broker-dealers requesting EBS data). The Commission understands that FINRA makes about half this number of requests.

[720] Large traders who file Form 13H with the Commission are assigned a "large trader identification number" by the Commission and must provide that number to their brokers for inclusion in the EBS records that are maintained by the clearing brokers. Rule 13h–1, subject to relief granted by the Commission, requires that execution time be captured (to the second) for certain categories of large traders. *See* Sections IV.D.2.a.(3) and IV.D.2.b, *supra* (discussing the EBS system and large trader reports and the limitations of these data sources in performing market reconstructions).

[721] While the Commission recognizes that some data sources are currently available earlier, those data sources are so fragmented as to make collecting them for a broad-based market reconstruction infeasible.

[722] Such benefits could be limited for market events that require linked data within five days of an event or if the linking algorithm in the Central Repository introduces data errors.

[723] *See* Concept Release on Equity Market Structure, *supra* note 733; *see also* Adopting Release, *supra* note 9, at 45733 (discussing the Concept Release on Equity Market Structure).

The Commission preliminarily believes that the CAT NMS Plan improves this situation, benefiting market analysis and research in support of SRO and Commission rulemaking. It would provide direct access to data that currently requires an often lengthy and labor-intensive effort to request, compile, and process. Additionally, the expected improvements in accuracy and completeness could benefit efforts to analyze the activities of particular categories of market participants, understand order routing behavior, identify short selling and short covering trades, issuer repurchases, and related topics. The requirement to store the data in a uniform format in the Central Repository is particularly important, as linking and normalizing data from disparate sources in different formats is a major component of completing many types of analyses and currently requires a significant amount of time. The Plan would provide direct access to data that regulators could use to more directly study issues such as high frequency trading, maker-taker pricing structures, short selling, issuer repurchases, and ETF trading.

The CAT NMS Plan could improve market analysis and research concerning HFT by providing regulators with direct access to more uniform and comprehensive data that identifies HFT activity more precisely compared to existing academic research that regulators currently utilize. Existing academic research on high frequency trading cannot precisely identify high frequency traders or their trading activity and more comprehensive regulatory analysis on high frequency trading currently relies on fragmented data that is cumbersome to collect and process.[724] For both academics and regulators, studying high frequency traders is currently difficult because these traders typically trade across many exchanges, and often off-exchange as well. NASDAQ distributes a trade and quote dataset to researchers for the purposes of performing academic studies on high frequency trading. This dataset identifies the trading and quoting activity of a group of high frequency traders identified by NASDAQ, but only includes activity from the NASDAQ exchange. Other exchanges and market centers currently do not provide such data to academics or the public.[725] As a result, studies of high frequency trading have been limited in their ability to examine thoroughly such strategies and their impact on the market. Because data on high-frequency trading tends to be fragmented across many data sources, it is difficult even for regulators to thoroughly analyze their aggregate activity level, study how their activity on one exchange affects their activity on another, and study the effect of particular high frequency strategies on market quality.[726]

The Plan also would provide information on how various broker-dealers route their customer orders and would allow regulators to study whether access fees and rebates drive routing decisions as much as execution quality considerations. This could inform debates about effects of conflicts of interest created by such maker-taker pricing. Studies of maker-taker pricing require information on routing decisions and how routing affects execution quality. Current academic studies of maker-taker pricing rely on data that provide imprecise information that cannot directly link routing and execution quality, and current similar research carried out by some regulators is often hindered by the significant amount of time it takes to obtain the relevant data from all market centers. However, the Plan would provide regulators with direct access to a data source that would link order lifecycle events together in a way that would allow regulators to more thoroughly analyze how and where broker-dealers route various order types. This could assist regulators in analyzing the importance of fees to the routing decisions and the ultimate impact on investors of any conflicts of interest in broker-dealer routing decisions. Such analysis could inform debates regarding whether maker/taker pricing structures are harmful to market structure.

Similarly, the Plan would provide regulators with data to better understand the nature of short selling. Existing studies of the effects of short selling lack the ability to associate short selling activity with customer-level data, and also lack the ability to distinguish buying activity that covers short positions from buying activity that establishes new long positions. The Plan would allow regulators to examine, for example, how long particular types of traders hold a short position and what types of traders short around corporate events.

The Plan, in requiring information about a Customer, would also facilitate studies of how certain entities other than natural persons trade and the market impact of their trading. For example, existing information on repurchases is aggregated at the monthly and quarterly level while the CAT Data on issuer repurchases would be much more granular. CAT Data would provide information that could determine the size and timing of issuer repurchases, for example. In addition, CAT Data would provide information that could help identify open market repurchases whereas existing data does not distinguish the type of repurchase. As such, the Plan would facilitate research that addresses the timing of issuer repurchases around corporate events or stock option grants and exercises, the extent to which issuers use the safe harbor in Rule 10b–18, and how aggressively issuers trade in the market. In addition, CAT Data on the trading of leveraged ETFs, particularly the end of day rebalancing, could shed light on how the leveraged ETFs relate to market volatility. In addition, Customer information should facilitate analyses of the secondary market trading of ETF Authorized Participants in their ETFs.[727] This could help regulators better understand the arbitrage process between an ETF and its underlying securities and the limitations of that arbitrage.

The Commission preliminarily believes that CAT Data would also better inform SROs and the Commission in rulemakings and assist them in conducting retrospective analysis of their rules and pilots. In particular, SROs would be able to use order data that is currently not available to examine whether rule changes are in the interest of investors. For example, direct access to consolidated audit trail data that identifies trader types could help an SRO examine whether a new rule improved market quality across the entire market and whether it benefitted retail and institutional investors specifically. Further, CAT Data would allow SROs to examine whether a rule change on another exchange was in the interest of investors and whether to propose a similar rule on their own exchange.

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[724] *See* High Frequency Trading, literature review, *available at https://www.sec.gov/marketstructure/research/hft_lit_review_march_2014.pdf.*

[725] Even if other exchanges did provide such data, the NASDAQ data fields do not include the identities of the high frequency traders. As a result researchers would not be able to study the activity of the same high frequency trader across exchanges.

[726] *See infra* note 724.

[727] The CAT NMS Plan does not include requirements to record or report information on the creation or redemption of ETF shares.

c. Surveillance and Investigations

The Commission preliminarily believes that the enhanced surveillance and investigations made possible by the implementation of the CAT NMS Plan could allow regulators to more efficiently identify and investigate violative behavior in the markets and could also lead to market participants that currently engage in violative behavior reducing or ceasing such behavior, to the extent that such behavior is not already deterred by current systems. The current markets are characterized by surveillance systems that identify violators so that regulators may address these violations. Given that violative behavior is identifiable in current markets, and potential violators know that there is a positive probability that they would be caught by surveillance should they commit a violation, fewer potential violators commit violations than would do so in markets that had no surveillance. Potential violators' expected probability of being caught influences their likelihood of committing a violation.[728] It then follows that any system change that increases the likelihood of violative behavior detection would increase potential violators' expected probability of being caught and thus reduce the likelihood that potential violators would commit a violation.

Specifically, if market participants believe that the existence of CAT, and the improved regulatory activities that result from improvements in data and data processes, increase the likelihood of regulators detecting violative behavior, they could reduce or eliminate the violative activity in which they engage to avoid incurring the costs associated with detection, such as fines, legal expenses, and loss of reputation. Such a reduction in violative behavior would benefit investor protection and the market as investors would no longer bear the costs of the violative behavior that would otherwise exist in the current system. Many of the improvements that would result from CAT could also allow regulators to identify violative activity, such as market manipulation, more quickly and reliably, which could improve market efficiency by deterring market manipulation and identifying and addressing it more quickly and more often when it occurs.[729]

(1) SRO Surveillance

The Commission preliminarily believes that the CAT NMS Plan would result in improvements in SROs' surveillance capabilities and that many of the benefits to SRO surveillance stem from improvements to data completeness. These benefits encompass a number of improvements to surveillance, including: detection of insider trading; surveillance of principal orders; cross-market and cross-product surveillance, and other market surveillance activities.

Rule 613(f) requires SROs to implement surveillances reasonably designed to make use of the CAT Data.[730] Further, data improvements resulting from the Plan would improve regulators' ability to perform comprehensive and efficient surveillance. As a result, the market surveillances required by Rule 613(f) could identify a broader and more nuanced set of market participant behaviors. As such, the CAT would also provide the opportunity for development of more effective and efficient surveillance system. It is also possible that the CAT Data and tools would enable further innovations in market surveillance beyond those currently contemplated. These innovations could be in response to new developments in the market over the next few years or to the new capabilities for regulators.

CAT Data would include additional fields not currently available in data used for surveillance.[731] The inclusion of Customer-IDs in the CAT would significantly improve surveillance capabilities, including surveillance designed to detect market manipulation and insider trading. Because currently available data do not include customer identifiers, SROs performing insider trading and manipulation surveillance could be unable to identify some suspicious trading[732] and must undertake multiple steps to request additional information after identifying suspect trades. The ability to link uniquely identified customers with suspicious trading behavior would provide regulators with better opportunity to identify the distribution of suspicious trading instances by a customer as well as improving regulators' ability to utilize customer-based risk assessment. This enhanced ability to link customers with behaviors would enable detection of market abuses that are perpetrated by customers trading or quoting through multiple accounts or on multiple trading venues.

Furthermore, having direct access to data could assist an SRO in its surveillance activities by potentially facilitating quicker responses to suspicious trading activity. Additionally, the inclusion of the principal orders of members would enable regulators to better identify rule violations by broker-dealers that have not previously had to provide audit trail data on their unexecuted principal orders. The evolution of the market has increased the importance of surveillance on principal orders. Many of these principal orders originate from algorithmic or high frequency trading firms who have been the recent subject of regulatory interest.[733] Further, some rules and regulations provide for differential treatment of the principal orders of broker-dealer market makers. Yet, some current data sources used for SRO surveillance exclude unexecuted principal orders,[734] limiting the surveillance for issues such as wash sales. As a result, many surveillance patterns are unable to detect certain rule violations involving principal orders.

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[728] It is well established in the economics and political science literature that common knowledge among market actors can lead to the deterrence of behaviors; *see, e.g.*, Schelling, Thomas, "The Strategy of Conflict: Prospectus for a Reorientation of Game Theory," *Journal of Conflict Resolution*, Vol. 2 No. 3 (1958) and Ellsberg, Daniel, "The Crude Analysis of Strategic Choices," *American Economic Review*, Vol. 51, No. 2 (1961). Therefore, market participants with knowledge of improvements in the efficiency of market surveillance, investigations, and enforcements, and consequently the increased probability of incurring a costly penalty, could be deterred from participating in violative behavior.

[729] For example, as discussed in Section IV.E.2.c(1), the Plan would allow regulators to more efficiently conduct cross-market and cross-product surveillance relative to surveillance using current data sources, and the requirement that data be consolidated in a single database would assist regulators in detecting violative (but not obvious) activity. To the extent that market participants are aware of the current challenges to regulators in performing cross-market surveillance and aggregating data across venues, and to the extent that they believe that their violative behavior is more likely to be detected if regulators' ability to perform those activities improves, they may reduce or eliminate violative behavior if the CAT Plan is approved.

[730] 17 CFR 242.613(f).

[731] As noted in Section IV.D.1.c, this economic analysis considers surveillance to be SROs running processing on routinely collected or in-house data to identify potential violations of rules or regulations.

[732] The Commission understands that SRO surveillances on topics such as insider trading and market manipulation do not incorporate data that identifies customers. Based on alerts from their surveillances, SROs may open a review that runs through several stages of data requests before identifying a customer. As discussed above, the Commission notes that SRO audit trails typically do not provide customer information but a recent FINRA rule change would require its members to report to OATS non-FINRA member customers who are broker-dealers. *See supra* note 407.

[733] *See* Securities Exchange Act Release No. 61358 (January 14, 2010), 75 FR 3594 (January 21, 2010) ("Concept Release on Equity Market Structure"); Exemption for Certain Exchange Members, *supra* note 394.

[734] *See* Section IV.D.2.b(1), *supra*.

The Plan would also improve regulators' efficiency in conducting cross-market and cross-product surveillance. The Plan would particularly enhance regulators' ability to perform cross-market surveillance, across equity and options markets, by enabling any regulator to surveil the trading activity of market participants in both equity and options markets and across multiple trading venues without data requests. Regulators would also have access to substantially more information about market participants' activity,[735] and the requirement that the data be consolidated in a single database would assist regulators in detecting activity that may appear permissible without evaluating data from multiple venues.[736] Likewise, it would assist regulators in detecting activity that may not appear violative without evaluating data from multiple venues.

Increasing market complexity and fragmentation has increased the importance of cross-market surveillance. The Commission noted in its Regulation of NMS Stock Alternative Trading Systems proposing release that, "[i]n the seventeen years since the Commission adopted Regulation ATS, the equity markets have evolved significantly, resulting in an increased number of trading centers and a reduced concentration of trading activity in NMS stocks." [737] However, because market data are fragmented across many data sources and because audit trail data lacks consistent customer identifiers, regulators cannot run cross-market surveillance tracking particular customers.[738] Furthermore, routine cross-product surveillance is generally not possible with current data. The potential enhancements in market surveillance enabled by the CAT NMS Plan are likely to result in more capable and efficient surveillance which could reduce violative behavior and protect investors from harm.

(2) Examinations

The Commission preliminarily believes that availability of the CAT would also improve examinations and that these improvements would benefit investor protection, and the market in general, by resulting in more effective supervision of market participants. The Commission conducted 493 broker-dealer examinations in 2014 and 484 in 2015, 70 exams of the national securities exchanges and FINRA in 2014 and 21 in 2015. In addition, the Commission conducted 1,237 investment adviser and investment company examinations in 2014 and 1,358 in 2015. Virtually all investment adviser examinations and a significant proportion of the Commission's other examinations involve analysis of trading and order data. Currently some data that would be useful to conduct risk-based selection for examinations, such as trade blotters, are not available in data sources available for pre-exam analysis.[739] Further, data available during exams often require regulatory Staff to link multiple data sources to analyze customer trading. For example, some customer identities are present in EBS data, but time stamps are not. To evaluate the execution price a customer received, it is necessary to know the time of the trade to compare the price of the customer's execution with the prevailing market prices at that time. This requires linking the EBS data with another data source that contains trades with time stamps (such as the trade blotter). These linking processes can be labor-intensive and require the use of algorithms that may not link with 100% accuracy. Finally, for investment adviser examinations, examiners sometimes use non-trading data such as Form PF, Form 13–F, Form ADV, and clearing broker reports as a proxy for trading data when selecting investment advisers for examinations. The CAT would improve examinations in the following specific ways.

First, the Commission preliminarily believes that the expected improvements in the data qualities discussed above would enhance the ability of regulators to select market participants for focused examinations on the basis of risk. The direct access to consolidated data in a single location would dramatically improve regulators' ability to efficiently conduct analyses in an attempt to select broker-dealers and investment advisers for more intensive examinations based on identified risk. Having CAT Data stored in the Central Repository in a linked format would allow examiners to access much more data directly through a query and without performing the linking process on an ad-hoc basis than is currently available before an exam. The ability to use Customer Account Information in the process for selecting investment advisers for exams, for example, could allow those selection models to incorporate trading data directly instead of imperfect proxies for trading data. This could lead to improved outcomes for risk-based examinations, such as more regulatory resources invested in examining market participants who are at an elevated risk of violating federal securities laws, rules, and regulations, and SRO rules, and a reduction in the proportion of examinations that might not have been necessary if a more complete view of the market participant's activity had been available. Compliant market participants could benefit from a reduction in the relative frequency of burdensome examinations. Improvements in the breadth and effectiveness of risk-based examination would help protect investors by increasing the likelihood of identifying market participants who are violating laws, rules and regulations.

Second, the Commission preliminarily believes that with the CAT, regulators would be able to examine market participants more effectively. In particular, regulators would be able to conduct certain types of exams more efficiently because of the inclusion of Customer-IDs in CAT. In addition, direct access to CAT Data would provide examination Staff with the ability to conduct more analysis prior to opening an examination because data would be available without the need to make a formal data request. In addition, the clock synchronization provisions of the Plan could aid regulators in sequencing some events more accurately, thereby facilitating more informed exams.[740] In sum, the Plan would allow the data collection portion of examinations to be completed more quickly with fewer formal data requests. More efficient examinations would help regulators better protect investors from the violative behavior of some market participants and could reduce examination costs for market participants who would have otherwise faced examinations that are less focused and more lengthy.

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[735] For example CAT Data would include Customer information, subaccount allocation information, exchange quotes, trade and order activity that occurs on exchanges, trade and order activity that occurs at broker-dealers that are not FINRA members, and trade and order activity that occurs at FINRA members who are not currently required to report to OATS. In addition CAT Data would require reporters to report data in milliseconds and would be directly available to non-FINRA regulators much faster than OATS is currently available to them. *See* Section IV.E.1.a, *supra*.

[736] *See* Section IV.E.1.c(2), *infra*. The Commission notes that while this is a benefit allowed by consolidation of data in the Central Repository, linked data would not be available in the Central Repository until T+5, which may delay the completion of surveillance activities.

[737] *See* Securities Exchange Act Release No. 76474 (November 18, 2015), 80 FR 80998 (December 28, 2015), at 81000.

[738] As noted in the above, SROs currently do not conduct routine surveillance that tracks particular customers because data currently used for surveillance does not include customer information.

[739] Regulators can obtain detailed equity transaction data by requesting a trade blotter from a particular firm; however, the data would only show the activity of that firm.

[740] *See* Sections IV.D.2.b(2), *supra* and IV.H.2.a(1), *infra*.

(3) Enforcement Investigations

Many Commission enforcement actions involve trade and order data.[741] The Commission preliminarily believes that the improvements in data qualities that would result from the CAT NMS Plan[742] would significantly improve the efficiency and efficacy of enforcement investigations, including insider trading and manipulation investigations. The Commission believes that more efficient and effective enforcement activity is beneficial to both investors and market participants because it deters violative behavior that degrades market quality and that imposes costs on investors and market participants.

Dramatic expected benefits come from improvements to the accuracy, accessibility, timeliness, and completeness of the data. As noted above,[743] compiling the data to support an investigation often requires a tremendous amount of time and resources and requires multiple requests to multiple data sources and significant data processing efforts, for both SROs and the Commission. While individual SROs have direct access to the data from their own markets, their investigations often require access to the data of other SROs because firms trade across multiple venues. Some enforcement investigations, including those on insider trading and manipulation, require narrow market reconstructions that allow investigators to view actions and reactions across the market. Currently, the data fragmentation and the time it takes to receive requested data, makes these market reconstructions cumbersome and time-consuming. Further, new data fields related to Customer information and the Allocation Reports should improve the completeness of the data available to investigators.

Under the CAT NMS Plan, the data for an enforcement investigation initiated at least five days after an event would be processed, linked, and available for analysis within 24 hours of a query, instead of the current timeline of weeks or longer. Further, some of the data processing steps that are now performed on an ad-hoc basis during an investigation would be systematically performed by the Plan Processor in advance.[744] The availability of uncorrected data by noon on T+1 could improve the Commission's chances of preventing asset transfers from manipulation schemes because regulators could use the uncorrected data to detect the manipulation and identify the suspected manipulators.[745] These improvements could shorten the times required to collect the data for investigations.

Other expected benefits stem from improvements in the accuracy and completeness of the data. The inclusion and expected improvement in the accuracy of customer identifying data could allow regulators to review the activity of specific market participants more efficiently; currently, identifying the activity of a single market participant across the market is cumbersome and prone to error.[746] This information would be particularly helpful in identifying insider trading, manipulation and other potentially violative activity that depends on the identity of market participants. Customer information could also be helpful to regulators in more efficiently identifying investors who qualify for disgorgement proceeds and in estimating such disgorgement proceeds.

The Commission also believes that increasing the proportion of market events that could be sequenced under the CAT NMS Plan could yield some benefits in enforcement investigations, improving investigations of insider trading, manipulation, and compliance with Rule 201 of Regulation SHO and Rule 611 of Regulation NMS.[747] The expected improvements in completeness could also benefit investigations by allowing regulators to observe in a consolidated data source relevant data that are not available in some or all current data sources, including time stamps, principal orders, non-member activity, allocations, and the identification of whether a trade increases or decreases an existing position. This data could be important, for example, when investigating allegations of market manipulation or cherry-picking in subaccount allocations. Having disaggregated information about allocations and issuer repurchases also could facilitate new ways to investigate allegations of unfair allocations and new ways to investigate and monitor manipulation through issuer repurchases.

(4) Tips and Complaints

The Commission preliminarily believes that the CAT NMS Plan would improve the process for evaluating tips and complaints by allowing regulators to more effectively triage tips and complaints, which could focus resources on behavior that is most likely to be violative.[748] The SROs and Commission evaluate thousands of tips and complaints regarding trading behavior each year. In fiscal years 2014 and 2015, the Commission received around 15,000 entries in its TCR system, approximately one third of which related to manipulation, insider trading, market events, or other trading and pricing issues. As stated in the Baseline Section, the analysis of tips and complaints follows three general stages. The Commission expects that the Plan would improve the second and third stages, the third in ways described in the Examinations and Enforcement Investigations Sections.[749] The second stage in the evaluations of tips, which help regulators determine the credibility of a tip or complaint, is limited by a lack of direct access to the most useful data; specifically, customer information and cross-market data.[750] The availability of the CAT Data would drastically increase the detail of data available to regulators for the purposes of tip assessment. This access would assist the SROs and Commission in identifying which tips and complaints are credible, would help ensure that regulators open investigations or examinations on credible tips and complaints, and would limit regulatory resources spent on unreliable tips and complaints. Likewise, regulated market participants would likely benefit from a reduction in unnecessary burdens placed upon them by inquiries that are related to tips that the CAT Data could show are not credible.

3. Other Provisions of the CAT NMS Plan

The Commission notes that there are a number of provisions of the CAT NMS Plan that provide for features that are uniquely applicable to a consolidated audit trail or otherwise lack a direct analog in existing data systems.

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[741] *See supra* note 711 and accompanying text.

[742] *See* Section IV.E.1, *supra*.

[743] *See* Sections IV.D.2.b(3) and IV.D.2.b(4), *supra*.

[744] *See* Section IV.E.1.d(4), *supra*.

[745] *See* Section IV.D.2.b(4), *supra*.

[746] *See* Section IV.D.2.b(2)D, *supra*.

[747] Again, benefits associated with the ability to sequence events may be limited in some cases because many order events would not be able to be sequenced completely with the standards established in the CAT NMS Plan. *See* Section IV.D.2.b(2)B.i, *supra*.

[748] *See* SEC Office of the Whistleblower, What Happens to Tips, *https://www.sec.gov/about/offices/owb/owb-what-happens-to-tips.shtml*.

[749] *See* Sections IV.D.2.a(4), *supra*.

[750] Cross-market data is especially key to market manipulation complaints, because regulators may need to examine a broad range data to see if a complaint is valid.

Therefore, rather than analyze the benefits of these provisions as compared to existing NMS Plans or data systems, the Commission has analyzed these provisions in comparison to a CAT NMS Plan without these features. The Commission preliminarily believes that these provisions of the CAT NMS Plan increase the likelihood that the potential benefits of the CAT NMS Plan described above would be realized.

a. Future Upgrades

Several provisions in the Plan seek to ensure that the CAT Data would continually be updated to keep pace with technological and regulatory developments. For example, the Plan would require that the Chief Compliance Officer review the completeness of CAT Data periodically,[751] that the Central Repository be scalable to efficiently adjust for new requirements and changes in regulations,[752] and that Participants provide the SEC with a document outlining how the Participants could incorporate information on select additional products and related Reportable Events.[753] The Commission preliminarily believes that these provisions would allow the CAT to be updated if and when the applicable technologies and regulations change.

Specifically, Rule 613(b)(6)(ii) and (iii) require that the Plan include a provision requiring a report at least every two years that details potential improvements in the CAT, such as incorporating new technology to improve system performance. Such a report would also include the costs of any such improvements. The CAT NMS Plan delegates responsibility for the report to the Chief Compliance Officer.

Section 6.1(d)(iv) of the Plan, with respect to new functionality, requires the Plan Processor to "design and implement appropriate policies and procedures governing the determination to develop new functionality for the CAT including, among other requirements, a mechanism by which changes can be suggested by Advisory Committee members, Participants, or the SEC," as well as providing for the escalation of reviews of proposed technological changes and upgrades to the Operating Committee, and for addressing the handling of surveillance.

With respect to upgrades to maintain existing functionality, the Plan Processor could evaluate and implement potential system changes and upgrades to maintain and improve the normal day-to-day operating function of the CAT System; material system changes and upgrades are to be performed by the Plan Processor in consultation with the Operating Committee.[754] The Plan Processor may on its own discretion initiate changes or upgrades to ensure compliance with applicable legal requirements.[755] Regular reports on the operations and maintenance of the CAT System are to be provided by the Plan Processor to the Operating Committee, including reports on system improvements contemplated in Appendix D, Upgrade Process and Development of New Functionality.[756]

Section 11 of Appendix D sets out the obligations of the Plan Processor with respect to the requirements discussed above (*e.g.*, to develop a process to add functionality to CAT, including reviewing suggestions submitted by the SEC). The Plan Processor must create a defined process for developing impact assessments, including implementation timelines for proposed changes, and a mechanism by which functional changes that the Plan Processor wishes to undertake could be reviewed and approved by the Operating Committee. The Plan Processor "shall not unreasonably withhold, condition, or delay implementation of any changes or modifications reasonably requested by the Operating Committee." [757] There must be a similar process to govern the changes to the Central Repository discussed above—*i.e.*, business-as-usual changes that could be performed by the Plan Processor with only a summary report to the Operating Committee, versus infrastructure changes that would require approval by the Operating Committee.[758] Finally, a process for user testing of new changes must be developed by the Plan Processor.[759]

Appendix C notes that the Plan Processor must ensure that the Central Repository's technical infrastructure is scalable (to increase capacity to handle increased reporting volumes); adaptable (to support future technology developments so that new requirements could be incorporated); and current (to ensure, through maintenance and upgrades, that technology is kept current, supported, and operational).[760]

These provisions are designed to ensure that the Participants consider enhancing and expanding CAT Data shortly after initial implementation of the CAT NMS Plan and that the Participants consider improvements regularly continuing forward. The Commission preliminarily expects that, in addition to these provisions, the CCO review would further facilitate proactive expansion of CAT to account for a regulatory change or change in how the market operates, or should there be a need for regulators to have access to new order events or new information about particular order events. To the extent that the Participants determine that an expansion is necessary and it is approved by the Commission, the Plan's scalability provision promotes the efficiency of the implementation of that expansion such that it could be completed at lower cost and/or in a timely manner.

Taken together, these provisions could also provide a means for the Commission to ensure that improvements to CAT functionality are considered so as to preserve its existing benefits, or that expansion of CAT functionality is undertaken in order to create new benefits. These methods are not certain, but the Commission does retain the ability to modify the Plan, if such a step becomes necessary to ensure that future upgrades are undertaken as necessary.[761] Moreover, the focus on scalability, adaptability, and timely maintenance and upgrades promotes a system that could be readily adapted over time, versus one that is difficult or costly to expand or modify. The Commission preliminarily believes that the provisions outlined above would allow the CAT Data to be continually updated to keep pace with technological and regulatory developments.

b. Promotion of Accuracy

The Commission notes that the Plan contains specific provisions designed to generally promote the accuracy of information contained in the Central Repository. The CCO is required, among other responsibilities, to perform reviews related to the accuracy of information submitted to the Central Repository and report to the Operating Committee with regard thereto,[762] and there is a special Compliance Subcommittee of the Operating

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[751] *See* CAT NMS Plan *supra* note 3, at Sections 4.12(b)(ii), 6.2(a)(v)(E). The Chief Compliance Officer would be required to perform reviews on matters including the completeness of information submitted to the Plan Processor or Central Repository and report findings periodically to the Operating Committee.

[752] *See id.* at Appendix D, Section 1.1.

[753] *See id.* at Section 6.11. This document is due within six months of the Effective Date of the CAT NMS Plan.

[754] *See id.* at Section 6.1(j).

[755] *See id.* at Section 6.1(k).

[756] *See id.* at Section 6.1(o).

[757] *See id.* at Appendix D, Section 11.1.

[758] *See id* at Appendix D, Section 11.2.

[759] *See id.* at Appendix D, Section 11.3.

[760] *See id.* at Appendix C, Section A.5(a).

[761] *See* 17 CFR 242.608.

[762] *See* CAT NMS Plan, *supra* note 3, at Section 6.2(a)(v)(E).

Committee, which is established to aid the CCO with regard to, among other things, issues involving the accuracy of information.[763] The Plan also contains certain other provisions intended to monitor and address Error Rates.[764]

The Operating Committee is responsible for adopting policies and procedures regarding the accuracy of CAT Data, which the Plan Processor shall be responsible to implement.[765] The Plan Processor in turn must provide regular reports regarding accuracy issues to the Operating Committee, specifically Error Rates relating to the Central Repository, including (to the extent the Operating Committee deems necessary or advisable) Error Rates by day, changes in the Error Rates over time, and Compliance Thresholds by CAT Reporter, by Reportable Event, by age before resolution, by symbol, by symbol type, and by event time. The Plan documents an initial Error Rate tolerance of 5%, but requires that, at least annually, the Plan Processor review the Error Rates and make recommendations to the Operating Committee for proposed changes to the maximum Error Rate; and requires that the Operating Committee set and periodically review the maximum Error Rate.[766]

Under the Plan, the Plan Processor would also provide details to each CAT Reporter on the number of rejected records and the reasons for their rejection on a daily basis. And on a monthly basis, the Plan Processor would publish report cards that would allow CAT Reporters to compare their Error Rates with those of industry peers; this is similar to the process used by FINRA for OATS reporting. The Plan Processor would notify each CAT Reporter that exceeds the maximum Error Rate, and provide the specific reporting requirements that they did not fully meet. Participants and the SEC could request reports on Error Rates from the Plan Processor. The Plan Processor would also provide statistics on each CAT Reporter's Compliance Thresholds—the CAT Reporter's specific Error Rate, which could serve as the basis for a review or investigation into the CAT Reporter's performance by the Participants or the SEC for failure to comply with CAT reporting obligations—to the Participants or the SEC.

In addition to providing CAT Reporters data on their Error Rates, the Plan states that the Participants believe that in order to meet Error Rate targets, industry would require certain resources, including a stand-alone testing environment, and time to test their reporting systems and infrastructure. The Technical Specifications must also be well-written and effectively communicated to CAT Reporters with sufficient time to allow proper systems updates.[767] Finally, the Plan notes that reporters may be subject to penalties or fines for excessive Error Rates, to be defined by the Operating Committee.[768]

The Commission preliminarily believes that these provisions to document Error Rates and promote data accuracy are reasonably designed to improve the overall accuracy of CAT Data relative to the exclusion of such provisions; however, the Commission also preliminarily believes that certain procedures outlined in the Plan may not incentivize all firms to further improve the quality of the data they report. The Commission recognizes that providing feedback to individual CAT Reporters on their individual Error Rates and information that compares Error Rates to industry peers could motivate firms with high Error Rates to reduce those rates, to avoid accruing penalties and fines associated with being a high Error Rate CAT Reporter.[769] However, it is not clear what incentive, if any, would be provided to firms with median Error Rates to improve their regulatory data reporting processes; this could collectively limit industry's incentives to reduce Error Rates. Furthermore, the Commission notes that, under the Plan, proposals to adjust the maximum allowable Error Rate are to originate from the Plan Processor. The Commission preliminarily believes that the Participants (as data users) have incentives to pursue lower Error Rates as data errors could complicate their efforts to perform their regulatory responsibilities. However, the Commission preliminarily believes that the Plan Processor would also have to allocate resources to error resolution, so could be incentivized to pursue Error Rate reduction.

The Commission notes that the Plan includes provisions requiring the establishment of a symbology database that will also foster accuracy. The Plan requires the Central Repository to create and maintain a symbol history and mapping table, as well as provide a tool to regulators and CAT Reporters showing the security's complete symbol history, along with a start of day and end of day list of reportable securities for use by CAT Reporters, in .csv format, by 6:00 a.m. on each trading day.[770] This resource will assist regulators in accurately identifying all trading activity of securities across venues, many of which do not natively follow listing exchange symbology.

Regarding the Plan's business clock synchronization requirements, the Plan also discusses the expectation that Participants and their Industry Members will each be required to maintain a five-year running log, or comparable procedure, documenting the time of each clock synchronization performed and the result of such synchronization. These practices would reveal the parameters of any discrepancies, between Business Clocks and NIST, that exceed 50 milliseconds.[771] As mentioned above, there is currently uncertainty regarding clock offsets, clock drift, and synchronization practices of Participants and Industry Members and the required practice of systematically maintaining five-year logs regarding these details should improve regulatory and industry understanding of these dynamics, which should provide a clearer foundation for evaluating the standards set in the Plan upon which future improvements could be considered.

c. Promotion of Timeliness

In addition to the specific timeliness benefits discussed in the foregoing Sections, the Plan contains some provisions that promote performance of the Central Repository, and that therefore could indirectly improve the timeliness of regulator access to or use of the CAT Data. These are found in capacity requirements for the Plan Processor, disaster recovery requirements to ensure the availability of the system, and in supervision and reporting of timeliness issues.

Specifically, first, the Plan Processor must measure and monitor Latency within the Central Repository's systems, must establish acceptable levels of Latency with the approval of the Operating Committee, and must establish policies and procedures to ensure that data feed delays are communicated to CAT Reporters, the Commission, and Participants' regulatory Staff.[772] The Plan further provides that "[a]ny delays will be posted for public consumption, so that CAT Reporters may choose to adjust the submission of their data appropriately. . . ." [773] The Plan Processor must also provide relevant parties, as well as to the public, with approximate timelines provided for system restoration.[774] Moreover, the Central Repository is required to be designed to meet certain capacity standards, including handling above-peak submission volumes, storing data for a sliding 6 year window (more than 29 petabytes of raw, uncompressed data), and the ability to add capacity quickly and seamlessly if needed.[775]

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[763] *See id.* at Section 4.12(b).

[764] *See id.* at Appendix C, Section A.3(b).

[765] *See id.* at Section 6.5(d).

[766] *See id.* at Section 6.5(d)(i).

[767] *See id.* at Appendix C, Section A.3(b).

[768] *See id.* at Appendix C, Section A.3(b), n.101.

[769] The Commission understands that OATS has an analogous feedback system, but not all current data sources have such a system.

[770] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 2.

[771] *Id.* at Appendix C, Section A.3(c).

[772] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 8.3.

Second, the Plan Processor must develop disaster recovery and business continuity plans to support the continuation of CAT business operations.[776] Business continuity planning must include a secondary site for critical staff, capable of recovery and restoration of services within 48 hours, with the goal of next day recovery.[777] The secondary site must have the same level of availability, capacity, throughput and security (physical and logical) as the primary site—*i.e.*, it must be fully redundant.[778] Thus, in the event of a widespread disruption, delays to CAT processing and regulator access to CAT of greater than a day or two could likely be prevented.

Third, the Chief Compliance Officer of the Plan Processor must conduct regular monitoring of the CAT System for compliance, including with respect to the reporting and linkage requirements in Appendix D.[779] Moreover, the Plan Processor must provide the Operating Committee with regular reports on the CAT System's operations and maintenance, including its capacity and performance, as set out in Appendix D.[780]

Finally, one caveat on the foregoing discussion is that system performance would in part be dependent on a series of SLAs to be negotiated between the Plan Participants and the eventual Plan Processor, including with respect to linkage and order event processing performance, query performance and response times, and system availability.[781] As these have not yet actually been negotiated, some of the key timeliness benefits anticipated to accrue from implementation of the Plan could be subject to the successful negotiation on an acceptable basis of the terms of the SLAs.

d. Operation and Administration of the CAT NMS Plan

There are certain elements of the CAT NMS Plan's governance that, like the other factors discussed in this subsection, are uniquely applicable to a consolidated audit trail, and that the Commission therefore analyzed in comparison to a CAT NMS Plan without these features (or that implements those features in a different way). The Commission preliminarily believes that these provisions of the CAT NMS Plan increase the likelihood that the potential benefits of the CAT NMS Plan described above would be realized.

(1) Introduction

In adopting Rule 613, the Commission established certain requirements for the governance of the CAT NMS Plan, stating that those "requirements are important to the efficient operation and practical evolution of the [CAT], and are responsive to many commenters' concerns about governance structure, cost allocations, and the inclusion of SRO members as part of the planning process." [782] The Commission did not, in Rule 613, establish detailed parameters for the governance of the CAT NMS Plan, but rather allowed the SROs to develop specific governance provisions, subject to a small number of requirements. Recognizing that Rule 613 left Plan Participants with wide latitude to determine how to structure the Plan's governance, the Commission in the Adopting Release also stated that "[a]fter the SROs submit the NMS plan, the Commission and the public will have more detailed information in evaluating the NMS plan." [783]

The Plan's governance is described in greater detail in Section III.A.3. above, but generally consists of a Delaware LLC, which is to "create, implement, and maintain the CAT and the Central Repository," and which is to be managed by the Operating Committee, consisting of one voting representative of each SRO Participant. The Operating Committee acts by majority or Supermajority Vote, depending on the issue. An Advisory Committee that includes a mix of broker-dealers, as required by Rule 613, is to "advise the [Operating Committee] on the implementation, operation and administration of the central repository." [784] These features are analyzed in greater detail below.

The Commission preliminarily believes that the governance provisions identified in the Adopting Release continue to be important to the efficient operation and practical evolution of the Plan, particularly given that there are a range of possible outcomes with respect to both the costs and benefits of the Plan that depend on future decisions. The way in which the identified governance provisions have been incorporated into the Plan, as discussed in greater detail below, could help facilitate better decision-making by the relevant parties. This, in turn, means that the Commission could have greater confidence that the benefits resulting from implementation of the Plan would be achieved in an efficient manner and that costs resulting from inefficiencies would be avoided.

The Commission notes that it can monitor whether the benefits of CAT are being achieved. For example, certain Operating Committee actions are subject to Commission approval.[785] The Commission also retains the ability to modify the Plan as it may deem necessary or appropriate.[786] To enable the Commission to exercise its oversight authority in an informed manner and to make its views known, representatives of the Commission are permitted to attend meetings of the Operating Committee, although the Commission representatives may be excluded from Operating Committee Executive Sessions.[787] Moreover, the Commission is entitled to receive information regarding the performance of the Central Repository, including a Regular Written Assessment of the operation of the Central Repository at least every two years, or more frequently in connection with any review of the Plan Processor's performance. The assessment would cover the performance metrics specified in Rule 613(b)(6)(i).[788] The Commission is also entitled to receive any reports prepared in connection with the Operating Committee's annual performance review of the Plan Processor.[789]

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[773] *Id.*

[774] *Id.*

[775] *See id.* at Appendix D, Section 1.3.

[776] *See id.* at Appendix D, Sections 5.3–5.4.

[777] *Id.*

[778] *Id.*

[779] *See id.* at Section 6.2(a)(v)(J).

[780] *See id.* at Section 6.1(o)(i).

[781] *See id.* at Appendix D, Section 8.5.

[782] *See* Adopting Release, *supra* note 9, at 45787.

[783] *Id.* at 45787–45788.

[784] *See* Rule 613(b)(7). Whereas Section 4.13(b) requires that the Operating Committee select representatives of different types of broker-dealers, it specifies that Advisory Committee representatives would "serve on the Advisory Committee on behalf of himself or herself individually and not on behalf of the entity for which the individual is then currently employed." *See* CAT NMS Plan, *supra* note 3, at Section 4.13(b).

[785] *See* CAT NMS Plan, *supra* note 3, at Section 4.3 (stating that actions authorized by Majority and Supermajority Vote of the Operating Committee are subject to approval by the Commission whenever such approval is required under the Exchange Act and the rules thereunder).

[786] *See* 17 CFR 242.608(b)(2).

[787] *See* CAT NMS Plan, *supra* note 3, at Section 4.4(a).

[788] *See* 17 CFR 242.613(b)(6)(i). Rule 613(b)(6) requires the Participants to provide the Commission with a written assessment of operation of the CAT

(2) Key Factors Relating to Governance

Two factors identified by the Commission in the Adopting Release as "important to the efficient operation and practical evolution of the [CAT]" are voting within the Operating Committee and the role and composition of the Advisory Committee. Voting thresholds that result in Operating Committee decision-making that balances the ability of minority members to have alternative views considered with the need to move forward when appropriate to implement needed policies can promote achievement of the Plan's benefits in an efficient manner. Similarly, an Advisory Committee that is balanced in terms of membership size and composition, as well as in its ability to present views to the Operating Committee, can result in better performance of its informational role, and thus more efficient achievement of the benefits of the Plan.

A. Voting

In adopting Rule 613, the Commission found that one Commenter's concerns about unanimous voting in the context of the CAT NMS Plan "have merit." Specifically, the Commission stated that "an alternate approach" to voting involving "the possibility of a governance requirement other than unanimity, or even super-majority approval, for all but the most important decisions" should be considered, as it "may be appropriate to avoid a situation where a significant majority of plan sponsors—or even all but one plan sponsor—supports an initiative but, due to a unanimous voting requirement, action cannot be undertaken."[790] The Commission "urge[d] the SROs to take into account the need for efficient and fair operation of the NMS Plan governing the consolidated audit trail" in setting voting thresholds.[791]

The Plan sets forth two voting thresholds for most matters to be decided by the Operating Committee.[792] Majority approval of the Operating Committee is sufficient to approve routine matters, arising in the ordinary course of business, while non-routine matters, outside the ordinary course of business, would require a supermajority (two-thirds) vote of the Operating Committee to be approved.[793]

The Plan generally eschews a unanimous voting threshold, except for the three clearly-defined circumstances noted above. Unanimity as a voting threshold may confer greater influence on holders of minority views, but it may also give a small faction the ability to extract private benefits inconsistent with Plan objectives by acting as holdouts.[794] In a hold-out dynamic, one member may be able to block action that all the other members agree should move forward. While this dynamic may occasionally be used productively, to produce better decision-making through fostering discussion and compromise, it also may give one member the power to stand in the way of needed change.

The ability of a single member to prevent action with regard to the Plan could be particularly troublesome if that member were motivated by a conflict of interest.[795] The Plan requires recusal of the member representing such a Participant from voting in the Operating Committee on matters that raise a conflict of interest, defined as any matter subject to a vote that interferes, or is reasonably likely to interfere, with the member's objective consideration of the matter, or that is, or would reasonably likely be, inconsistent with the regulatory purpose and objectives of CAT.[796] Recusal of a member could also be compelled by a supermajority of the Operating Committee.[797] If conflicts of interest were the cause of all unproductive holding-out (*i.e.,* holding out that does not contribute to better decision-making), then a robust conflict of interest provision could mitigate some of the negative features of unanimous voting.

Majority voting as a voting threshold strikes a different balance between the rights of members than does unanimous voting. Majority voting avoids the hold-out problem of unanimity, but can result in decisions that bear less concern for the interests of the minority members. Whether it does so or not may depend at least in part on voting dynamics on the Operating Committee. Under the Plan, each member has only one vote within the Operating Committee, and so an individual member—and represented Participant—could not unilaterally advance a position that benefits only the Participant under the Plan. That said, however, some individual members could exercise more influence than others over the outcome of the voting process. Participant SROs that are affiliated with one another could vote as a bloc by designating a single individual to represent them on the Committee.[798] Individuals who represent more than one SRO would then in principle

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at least every two years, along with a detailed plan, based on the assessment, that indicates any potential improvements to the performance of the CAT and includes an estimate of the costs and potential impacts of such improvements on competition, efficiency and capital formation, as well as an estimated implementation timeline for such potential improvements.

[789] *See* CAT NMS Plan, *supra* note 3, at Section 6.1(n). The review may be more frequent than annually if at the request of two non-affiliated Participants. The Commission also has other means of accessing information (*e.g.,* through books & records requirements).

[790] *See* Adopting Release, *supra* note 9, at 45787.

[791] *Id.*

[792] As noted in Section IV.G.4, *infra,* the Plan requires unanimous voting in only three circumstances: A decision to obligate Participants to make a loan or capital contribution, a decision to dissolve the Company, and a decision to take an action by written consent instead of a meeting.

[793] *See* CAT NMS Plan, *supra* note 3, at Section 4.3; Appendix C, Section B.8(d). (specifying actions of the Operating Committee that require a Supermajority Vote); *see also id.* at Appendix C, Section D.11(b).

[794] There are other governance-related trade-offs for majority voting versus supermajority voting; these are discussed in greater detail in the Plan. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Sections B.8(d) and D.11(b).

[795] That there are potential conflicts of interest between Participants acting in their self-regulatory capacities and Participants acting in the other capacities in which they serve is well-documented; *see, e.g.,* Peter M. DeMarzo, Michael J. Fishman, and Kathleen M. Hagerty, "Self-Regulation and Government Oversight," 72 *Review of Economic Studies* 687 (2005); *see also* David Reiffen and Michel Robe, "Demutualization and Customer Protection at Self-Regulatory Financial Exchanges," *Journal of Futures Markets* (2011) and Securities Exchange Act Release No. 50700 (November 18, 2004), 69 FR 71256 (December 8, 2004) (Concept Release Concerning Self-Regulation); John W. Carson, *Conflicts of Interest in Self-Regulation: Can Demutualized Exchanges Successfully Manage Them?* (World Bank Policy Research Working Paper 3183, December 2003). These conflicts could be further complicated if the individual employee of the Participant SRO who represents the Participant SRO on the Operating Committee sought to advance a private gain for the individual employee that is inconsistent with the Plan's regulatory objective or the objective of the Participant SRO. Indeed, the idea that an agency conflict between a natural person and the entity that the person represents has been discussed extensively in the academic literature on the governance of corporations; *see, e.g.,* Jonathan Berk and Peter DeMarzo, 2011, *Corporate Finance,* Second Edition, Prentice Hall (Section 2.1: Corporate Governance and Agency Costs).

[796] *See* CAT NMS Plan, *supra* note 3, at Section 4.3(d) (recusal requirement) and Section 1.1 (definition of Conflict of Interest). Section 4.3(d) also automatically recuses a member from voting with respect to matters relating to the selection or removal of the Plan Processor if they or their affiliates are, or are bidding to be, the Plan Processor. *Id.*

[797] *See* CAT NMS Plan, *supra* note 3, at Section 4.3(d).

[798] *See* CAT NMS Plan *supra* note 3, at Section 4.2(a) ("One individual may serve as the voting member of the Operating Committee for multiple Affiliated Participants, and such individual shall have the right to vote on behalf of each such Affiliated Participant.") Even if separate representatives were appointed for each voting member, such individuals could agree to vote in a bloc; *see also* Section IV.G.1, *infra,* (discussing how many affiliated groups would need to vote together to reach a majority or supermajority).

exercise more influence than other individuals on the Operating Committee.[799] The Chair of the Operating Committee also could exercise more influence than other members on the Committee, even though the Chair only has one vote, through influence over Committee processes.[800] Ultimately, however, no individual would have unilateral control over vote outcomes, even at a majority voting threshold. Whether the threshold results in adequate attention to the rights of minority members could therefore depend on the ease with which a majority coalition can be formed, whether those coalitions are fluid or static, and whether in practice decision-making is collegial or contentious. While majority voting could pose a risk of disregard for minority positions, that risk here is mitigated in that majority voting only applies to the less important matters that could arise in the operations of the Plan.

The Plan's supermajority voting requirement for more important matters represents an intermediate ground between majority and unanimous voting, requiring more than a bare majority of members to agree to support a position, which therefore enhances the ability of members of the minority to seek to have their views reflected in the ultimate decision, while limiting the ability of minority members to act as holdouts. That said, the supermajority voting requirement may also have some disadvantages: To the extent that rules and practices already in place require correction, a supermajority voting requirement may make it more difficult to assemble the votes necessary to make needed changes. For example, supermajority voting could have the indirect effect of locking in the preferred business practices of the inaugural members of the Operating Committee. For decisions later in the Plan implementation, this lock-in effect of supermajority voting could make it more difficult for the Operating Committee to take non-routine actions, such as replacing the Plan Processor after the initial selection decision.[801]

B. Advisory Committee

Rule 613(b)(7) requires that the Plan designate an Advisory Committee.[802] Specifically, Rule 613(b)(7) calls for the formation of an Advisory Committee to advise the plan sponsors on the implementation, operation, and administration of the Central Repository, as detailed above in Section III.A.3 of this Notice.[803] Under Rule 613(b)(7)(i), the Advisory Committee must include representatives of member firms of the plan sponsors (broker-dealers), acting in their own capacities as individuals on the Committee. Under Rule 613(b)(7)(ii), plan sponsors must give members of the Committee access to information and permit them to express their views and attend meetings of the Operating Committee. Also under Rule 613(b)(7)(ii), the Operating Committee has the right to exclude members of the Advisory Committee from its deliberations by meeting in Executive Session by a Majority Vote of its members.

The Adopting Release states that the "provision requiring the creation of an Advisory Committee, composed at least in part by representatives of the plan sponsors," was "[i]n response to the comment requesting that the broker-dealer industry receive a 'seat at the table' regarding governance of the NMS plan." [804] In addition, the Commission "encourage[d] the plan sponsors to, in the NMS plan, provide for an Advisory Committee whose composition includes SRO members from a cross-section of the industry, including representatives of small-, medium-and large-sized broker-dealers." Rule 613 does not give broker-dealers a vote on the Operating Committee itself. In the Adopting Release, the Commission stated that the structure of Rule 613 as adopted "appropriately balances the need to provide a mechanism for industry input into the operation of the central repository, against the regulatory imperative that the operations and decisions regarding the [CAT] be made by SROs who have a statutory obligation to regulate the securities markets, rather than by members of the SROs, who have no corresponding statutory obligation to oversee the securities markets."

In implementing these provisions of Rule 613, the Plan requires the Advisory Committee to have diverse membership.[805] Section 4.13 of the Plan requires an Advisory Committee with a minimum of six broker-dealers of diverse types and six representatives of entities that are not broker-dealers.[806] That is, five of twelve seats on the initial Advisory Committee would be filled by representatives, respectively, of the client of a registered broker or dealer, two types of institutional investors, and two others with academic and regulatory expertise. Terms of Advisory Committee members would not exceed three years, and memberships would be staggered so that a third of the Committee would be replaced each year.[807]

The Commission believes that the Plan's provisions regarding the Advisory Committee advance the goals of the Advisory Committee articulated in the Adopting Release: To allow the Operating Committee to receive the benefit of members' expertise with respect to "expected or unexpected operational or technical issues" and "help assure the Commission and market participants that any requirements imposed on SRO members will be accomplished in a manner that takes into account the burdens on SRO members."

Given the primary purpose of the Advisory Committee as a forum to communicate important information to the Operating Committee, which the Operating Committee could then use to ensure its decisions are fully-informed, the Plan's choices in implementing Rule 613 do reflect some trade-offs. One factor in the ability of the Advisory Committee to collect relevant information for the Operating Committee is the quality and depth of the expertise, and the diversity of viewpoints, of the Advisory

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[799] By enabling a single individual (*i.e.*, natural person) to vote on behalf of groups of Affiliated Participant SROs, the Plan reduces the share and number of individuals needed to approve a committee action below the share and number of votes required for approval. For example, as few as two individuals (who would possess more than one-third of member votes) may be sufficient to block an action that requires a two-thirds (a supermajority) vote for approval of an action of the Operating Committee under the Plan. This casting of multiple votes by a single group is limited for some decisions under the Plan, however. *See* CAT NMS Plan, *supra* note 3, at Section 4.4(a) (Meetings of the Operating Committee: special and emergency meetings); *see also* Section IV.G.1, *infra* (discussing, in n.1077, the various affiliated exchanges among the 20 members of the Operating Committee, which could appoint a single individual to represent them).

[800] Specifically, *see* CAT NMS Plan, *supra* note 3, Section 4.2(b) which establishes that there shall be elected a Chair from among the members of the Operating Committee, and states that the Chair's powers are those that the Operating Committee may from time to time prescribe. For example, the Chair may be granted the power to set the agenda of Operating Committee meetings, and thereby advance agenda items favorable to the Chair. *Id.* Section 4.2(b) also specifies that the Chair is *not* entitled to a tie-breaking vote and that the Chair may be removed by Supermajority Vote of the Operating Committee.

[801] *See id.* at Section 4.3(i). Supermajority voting as a governance mechanism in the CAT NMS plan is distinct from an analysis of supermajority voting rules in other settings.

[802] 17 CFR 242.613(b)(7).

[803] *See* Section III.A.3 (Requirements Pursuant to Rule 608(a)), *supra; see also* Section IV.G.4.a, *infra*, for a discussion of the effects of the Advisory Committee on the efficiency of the Plan.

[804] *See* Adopting Release, *supra* note 9, at 45786.

[805] *See* CAT NMS Plan, *supra* note 3, Section 4.13(b).

[806] *See id.* at Section 4.13(b)(i) through (xii).

[807] *See id.* at Section 4.13(c).

Committee's membership.[808] A larger and more diverse Advisory Committee may have better access to expertise and diversity of viewpoints from among members for use in advising the Operating Committee.[809] But, members of a larger and more diverse Advisory Committee would face potentially greater difficulties in working among themselves to identify and convey the information that is available to them. The Plan balances these considerations by providing the Advisory Committee with sufficient membership to be able to generate useful information and advice for the Operating Committee, while being at a sufficiently low size and diversity level to permit the members to be able to work together without undue obstacles that could otherwise limit the Advisory Committee's effectiveness in conveying their views.[810]

Another factor in the ability of the Advisory Committee to advise the Operating Committee is whether the Advisory Committee, having assembled a diverse set of views, could effectively communicate those views to the Operating Committee. Two Plan provisions, relating to the staggering of member terms and the limits on participation of the Advisory Committee under Rule 613(b)(7)(ii), bear on this communication.[811]

First, the Plan provides for Advisory Committee members to serve for staggered three-year terms in order to provide "improved continuity given the complexity of CAT processing." [812] Staggering of terms would prevent the entire Advisory Committee or large numbers of its members from turning over in any given year, which could enhance the cohesion of the Advisory Committee, and thereby its effectiveness in communicating member viewpoints to the Operating Committee. Second, the Plan gives the Advisory Committee varying roles with respect to the different actions to be taken by the Operating Committee. While the Advisory Committee members may attend meetings and submit views to the Operating Committee on matters prior to a decision by the Operating Committee, the Operating Committee may exclude Advisory Committee members from Executive Sessions.[813]

An additional factor that bears on the ability of the Advisory Committee to advise the Operating Committee is a feedback loop: Whether the Advisory Committee could receive sufficiently detailed information on the operations of the Plan so that the Advisory Committee members can, in turn, provide decision-useful information to the Operating Committee. Here, the Plan specifies that the Advisory Committee has the right to receive from the Operating Committee information necessary and appropriate to the fulfillment of its functions, but that the scope and content of the information is to be determined by the Operating Committee.[814] Thus, the Commission notes that the Operating Committee could act to limit the effectiveness of the Advisory Committee—for example, if the Operating Committee were to fail to provide Advisory Committee members with notice of the items to be deliberated and voted upon by the Operating Committee with sufficient time and particularity for the Advisory Committee to be able to adequately fulfill its function, or fail to provide other pathways for Advisory Committee members to become aware of topics of interest or concern to the Operating Committee.

One other determinant bears on the effectiveness of the Advisory Committee in ensuring that the Operating Committee makes decisions in light of diverse information—whether the Operating Committee actually takes into account the facts and views of the Advisory Committee before making a decision. Although the Plan expressly provides for Advisory Committee input, it does not contain a mechanism—such as requiring the Operating Committee to respond to the Advisory Committee's views, formally or informally, in advance of or following a decision by the Operating Committee—to ensure that the Operating Committee considers the views of the Advisory Committee as a part of the Operating Committee's decision-making process.

(3) Conclusion

The Commission preliminarily believes that the governance provisions discussed above, which the Commission identified as being "important to the efficient operation and practical evolution of the [CAT], and . . . responsive to many commenters' concerns about governance structure, cost allocations, and the inclusion of SRO members as part of the planning process," could help promote better decision-making by the relevant parties. These provisions thus could mitigate concerns about potential uncertainty in the economic effects of the Plan by giving the Commission greater confidence that its expected benefits would be achieved in an efficient manner and that costs resulting from inefficiencies would be avoided.

4. Request for Comment on the Benefits

The Commission requests comment on all aspects of the discussion of the potential benefits of the CAT NMS Plan. In particular, the Commission seeks responses to the following questions:

257. Do Commenters agree with the Commission's assessment of the potential benefits of the CAT NMS Plan? Why or why not?

258. To what extent do the uncertainties related to future decisions about Plan implementation impact the

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[808] In a role similar to that of the Advisory Committee, outsiders on corporate boards of directors can bring expertise and independence to board actions, thereby enhancing board effectiveness. Trade-offs in determining the optimum size and composition of boards is the subject of extensive academic research. For example, Lehn, Kenneth, Sukesh Patro, and Mengxin Zhao, 2009, "Determinants of the size and structure of corporate boards: 1935–2000," *Financial Management*, 747–780, consider the size and composition of the board to be determined by trade-offs associated with the information the directors bring to boards, which facilitate their monitoring and advisory role, and the coordination costs and free-rider problems associated with their presence. Harris, Milton and Raviv, Artur, 2008, "A Theory of Corporate Control and Size," 21 *Review of Financial Studies*, 1797–1832, model the trade-off between benefits of greater expertise that outside directors bring versus the costs of an aggravated free-rider problem to arrive at the optimum number of outside directors on the board. Collective-action and communication problems can limit the effectiveness of a board as it gains members as explored by Harris and Raviv (2008) and Lehn, Patro, and Zhao (2009), in addition to Raheja, Charu, 2005. "Determinants of Board Size and Composition: A Theory of Corporate Boards," 40 *Journal of Financial and Quantitative Analysis*, 283–306, and Yermack, David, "Higher Market Valuation for Firms with a Small Board of Directors," *Journal of Financial Economics*, XL (1996), 185–211; *see also* Jerayr Haleblian and Sydney Finkelstein, "Top Management Team Size, CEO Dominance, and Firm Performance: The Moderating Roles of Environmental Turbulence and Discretion," *The Academy of Management Journal*, Vol. 36, No. 4 (August, 1993), 844–863.

[809] For related literature that expressly examines trade-offs and consequences of "diverse" boards, *see* Baranchuk, Nina, and Phil Dybvig, 2009, "Consensus in diverse corporate boards," *Review of Financial Studies* 22(2), 715–747; and Malenko, Nadya, 2014, "Communication and Decision-Making in Corporate Boards," *Review of Financial Studies* 27(5), 1486–1532.

[810] Another factor that may bear on the Advisory Committee's ability to assemble a diverse range of views is the Plan's provisions that Advisory Committee members sit in their individual capacity, rather than as a representative of their employer. This may give Advisory Committee members greater freedom to speak to issues common to similarly-situated entities (*e.g.*, large broker-dealers), rather than potentially-idiosyncratic views of the individuals' employers, which broader views in turn could better inform the Operating Committee about issues or impacts associated with the operation of the CAT.

[811] *See* CAT NMS Plan, *supra* note 3, at Section 4.13(b) and (c).

[812] *See id.* at Section 4.13(c); Appendix C, Section D.11(b) ("Governance of the CAT . . . Industry Members also recommended a three-year term with one-third turnover per year . . . to provide improved continuity given the complexity of CAT processing.").

[813] *See* CAT NMS Plan, *supra* note 3, at Section 4.13(d).

[814] *Id.* at Section 4.13(e).

assessment of potential benefits of the Plan? Please explain.

259. Do Commenters agree that the inclusion of the data fields in one centralized data source in the CAT NMS Plan described above would result in more complete data than what is currently available to regulators? Which elements of the Plan would deliver improvements to completeness? Are there any elements of the Plan that would degrade the completeness of regulatory data? Please explain.

260. The Commission reviewed gap analyses that examine whether the CAT Data would contain all important data elements in current data sources[815] and concluded that certain information is not included (*e.g.,* OATS data fields that allow off-exchange transactions to be matched to their corresponding trade reports at trade reporting facilities and certain EBS elements). Please identify any such data elements that are missing under the Plan.

261. The Commission also seeks comment on the significance of the gaps identified in the analyses. If there are particular fields that are identified in the gap analyses that should not be incorporated into CAT, please identify them and explain.

262. The Commission expects that, pursuant to the requirements of the Plan,[816] any missing elements that are material to regulators would be incorporated into CAT Data prior to the retirement of the systems that currently provide those data elements to regulators. Do you agree? Why or why not? Do you agree that CAT Data would include the audit trail data elements that currently exist in audit trail data sources? Why or why not?

263. Do Commenters agree that the CAT NMS Plan would improve the accuracy of the data available to regulators? Which elements of the Plan would deliver these improvements? Are there any elements of the Plan that would degrade the accuracy of regulatory data relative to today? Are there any elements of the Plan that would prevent or limit improvements in the accuracy of regulatory data? Are the provisions of the Plan related to accuracy appropriate and reasonable in light of the goal of improving data quality? Please explain.

264. Do Commenters believe that procedural protections in the Plan, such as the requirement that the Technical Specifications be "consistent with [considerations and minimum standards discussed in] Appendices C and D," the requirement to provide the initial Technical Specifications and any Material Amendments thereto to the Operating Committee for approval by Supermajority Vote,[817] and the requirement that all non-Material Amendments and all published interpretations be provided to the Operating Committee in writing at least ten days before publication,[818] can mitigate uncertainty regarding future decisions and help promote accuracy? Please explain.

265. Do Commenters believe that the Error Rate, validations, and error resolution processes described in the CAT NMS Plan would provide improvements in accuracy? Are these processes appropriate and reasonable in light of the goal of improving data quality? Please explain.

266. The Plan specifies an error correction process after initial reports are received and indicates that practically all errors identifiable by the validations used in the error correction process would be corrected by 8:00 a.m. Eastern Time on day T+5, stating that errors are expected to be "de minimis" after the error correction period.[819] Do Commenters believe that this is a reasonable conclusion? Please explain.

267. Do Commenters believe that the provisions in the CAT NMS Plan related to event sequencing would provide improvements in accuracy? To what degree does the 50 millisecond clock synchronization requirement enable or prevent regulators' ability to sequence events that occur in different Execution Venues? Are the provisions of the Plan related to event sequencing appropriate and reasonable in light of the goal of improving data quality? Please explain.

268. The Plan does not specify the approach that would be used to sequence events when time stamps are identical. Do Commenters believe that there is a way for the Plan Processor to sequence events with identical time stamps? How would this process, or the lack of a process, affect the quality of the CAT Data?

269. The Plan states that "the Participants plan to require that the Plan Processor develop a way to accurately track the sequence of order events [of a particular order] without relying entirely on time stamps."[820] Do Commenters believe it is feasible to properly sequence the events of a simple or complex order without relying entirely on time stamps? Please explain. If such a procedure could be developed, how accurate would it be?

270. The Plan further states, "For unrelated events, *e.g.,* multiple unrelated orders from different broker-dealers, there would be no way to definitively sequence order events within the allowable clock drift as defined in Article 6.8."[821] Do Commenters believe it would be feasible for the Plan Processor to develop a way to accurately sequence such unrelated orders given the time stamp and clock synchronization requirements of the Plan? Please explain. If such a procedure could be developed, how accurate would it be?

271. Do Commenters agree with the Commission's data analysis of the clock synchronization improvements from the Plan? If not, how could the Commission improve the data analysis? Do Commenters have their own data analysis that informs on the expected improvements from the Plan? If so, please provide. Do Commenters agree that the improvements to the percentage of sequenceable order events by Plan standards are modest and the requirements of the Plan may not be sufficient to completely sequence the majority of market events relative to all other events?

272. Do Commenters agree with the Plan's assessment of the industry standard for clock synchronization? Does this reflect the standards for all CAT Reporters, including exchanges, ATSs, and other broker-dealers? If not, what would be a more appropriate way to define the industry standard for clock synchronization?

273. Do Commenters believe that the provisions in the CAT NMS Plan related to linking data would result in improvements to the accuracy of the data available to regulators? Would the process for linking orders across market participants and SROs improve accuracy compared to existing data? Would the Plan Processor be able to

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[815] *See* SEC Rule 613—Consolidated Audit Trail (CAT) OATS—CAT Gap Analysis and SEC Rule 613—Consolidated Audit Trail (CAT) Revised EBS—CAT GAP Analysis, *available at http://www.catnmsplan.com/gapanalyses/index.html.* The Commission acknowledges that the Participants are continuing to study gaps between current regulatory data sources and the Plan as filed. CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9

[816] The Plan requires that, prior to the retirement of existing systems, the CAT Data must contain data elements sufficient to ensure the same regulatory coverage provided by existing systems that are anticipated to be retired. *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 3.

[817] *Id.* at Section 6.9(a). The Commission notes that the standards in Appendices C and D do not cover all decisions that would affect the accuracy of the data.

[818] *See* CAT NMS Plan, *supra* note 3, at Section 6.9(c)(i).

[819] *See id.* at Appendix C, Section A.3(b) n.102. "De minimis" is not defined and no numerical Error Rate is given. The Plan also includes a compliance program intended to help achieve this goal.

[820] *See* CAT NMS Plan *supra* note 3 at Appendix C, Section A.3(c).

[821] *See id.* at Appendix C, Section A.3(c) n.110.

develop expertise in linking data more efficiently than the regulatory staff members from each entity could on their own? Please explain.

274. Would the Error Rates associated with the linking process represent improvements to data accuracy? Would Approach 1 to data conversion result in a lower Error Rate than Approach 2? Would the Approach affect the Plan Processor's ability to build a complete and accurate database of linked data? Are the Error Rates associated with the linking process appropriate and reasonable in light of the goal of improving data quality? Please explain.

275. Do Commenters believe that the inclusion of unique Customer and Reporter Identifiers would increase the accuracy of information in data regulators use and provide benefits to a broad range of regulatory activities that involve audit trail data? Please explain.

276. Do Commenters agree that the CAT Data would provide less aggregated allocation information and less aggregated issuer repurchase information? Why or why not? Would these changes significantly affect regulatory activities?

277. Do Commenters agree that the CAT NMS Plan would improve the accessibility of the data available to regulators? Which elements of the Plan would deliver these improvements? Are there any elements of the Plan that would degrade the accessibility of regulatory data relative to today? Are there any elements of the Plan that would prevent or limit improvements in the accessibility of regulatory data?

278. Do Commenters believe that the minimum requirements for direct access ensure that the Plan would improve access to current data, including the process of requesting data? Would the direct access facilitated by the Plan provide sufficient capacity and functionality? Would direct access reduce the number of ad hoc data requests?

279. Do Commenters agree that the CAT NMS Plan would improve the timeliness of the data available to regulators? Which elements of the Plan would deliver these improvements? Are there any elements of the Plan that would degrade the timeliness of regulatory data relative to today? Are there any elements of the Plan that would prevent or limit improvements in the timeliness of regulatory data?

280. Do Commenters believe that the CAT NMS Plan will facilitate the ability of each national securities exchange and national securities association to comply with the requirement in Rule 613(f) that they develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the consolidated audit trail? If not, why not?

281. Do Commenters agree that the CAT NMS Plan will facilitate the ability of regulators to conduct risk-based examinations? Why or why not? How significantly would the Plan improve risk-based examinations? Please explain.

282. Do Commenters agree that the CAT NMS Plan will improve the efficiency of regulators' enforcement activities? Why or why not? Which specific regulatory activities would be most improved by the CAT NMS Plan? Please explain.

283. Do Commenters agree that the CAT NMS Plan will improve the ability for regulators to determine the credibility of tips and complaints? Please explain.

284. Overall, do Commenters agree that the surveillance, examination, and enforcement activities of regulators would improve with the CAT NMS Plan? Please explain. Would these improvements be significant enough to deter violative behavior? Please explain. What would be the economic effect of this deterrence?

285. Would such improvements reduce the percentage of activities that generate false positives (*i.e.,* detection of behaviors that are not violative) and/or reduce the percentage of activities that are false negatives (*i.e.,* not detecting behaviors that are violative)? Please explain. What would be the economic effect of any changes in false positives or false negatives?

286. Do Commenters agree with the Commission's assessment of the economic effects of the improvements to surveillance, examinations, and enforcement from the CAT NMS Plan? Please explain.

287. Do Commenters agree that the CAT NMS Plan would improve the efficiency and effectiveness of regulators conducting analysis and reconstruction of market events? Please explain. Do Commenters agree with the Commission's assessment of the benefits to investors and the market of more efficient and effective analysis and reconstruction of market events? Please explain.

288. Do Commenters agree that the CAT NMS Plan would facilitate market analysis and research that would improve regulators' understanding of securities markets? Please explain. Do Commenters agree with the Commission's assessment of the benefits to investors and the markets from regulators having a better understanding of the markets? Please explain.

289. Do Commenters believe that there are other features of the CAT NMS Plan uniquely applicable to a consolidated audit trail that increase the likelihood that the potential benefits of the CAT NMS Plan would be realized? Please identify these features and explain.

290. Do Commenters agree that provisions of the Plan related to future upgrades, promoting accuracy, and promoting timeliness increase the likelihood that the potential benefits of the CAT NMS Plan would be realized? Do current regulatory data sources have provisions similar to ones the Commission analyzed? If so, please describe such provisions.

291. Do Commenters believe that provisions of the Plan provide incentives to reduce reporting errors for a CAT Reporter that has an Error Rate that does not exceed the thresholds that would trigger fines under the Plan or possible enforcement actions by regulators? If so, what are the incentives? Could the Plan provide different incentives to reduce reporting errors? Please explain.

292. Under the Plan, proposals to adjust the maximum allowable Error Rate are to originate from the Plan Processor. Do Commenters agree with this approach? Please explain. Should others, such as the Operating Committee, or Advisory Committee be able to originate changes to the Error Rate? Please explain.

293. Do Commenters agree that communication of data feed delays for public consumption is beneficial to the operation and effectiveness of the CAT? If so, in what ways? What are the benefits and costs of such public disclosure?

294. Do Commenters agree that the governance provisions identified in the Rule 613 Adopting Release continue to be important to the efficient operation and practical evolution of the Plan, and therefore to the achievement of the Plan's benefits? Are there other aspects of the Plan's governance that might enhance (or detract from) the Plan's ability to achieve its intended benefits? Are there other governance aspects that the Plan does not address that might enhance, if included (or detract from, if not remedied) the Plan's ability to achieve its intended benefits? Please identify these other features and explain how they enhance (or detract from) the Plan's ability to achieve its intended benefits.

295. The Commission's analysis of the provisions of the Plan relating to voting assumes that these provisions will

promote the benefits sought to be achieved by the Plan because, by assigning different voting thresholds to different actions, the Plan seeks to address potential conflict of interest and holdout problems, balancing dissenters' rights with the need to move forward with needed changes. Is this a complete and accurate list of the factors that could bear on whether the voting provisions of the Plan will promote the benefits sought to be achieved by the Plan, and did the Commission correctly weigh these factors in preliminarily concluding that the Plan's voting provisions could help promote better Plan decision-making and, thus, improve achievement of the Plan's goals? If the Commission should have considered other factors or weighed the identified factors differently, please explain how, and what the costs and benefits of an alternative approach would be.

296. The Plan provides that "[a]ll votes by the Selection Committee shall be confidential and non-public."[822] What are the effects of confidential voting as a means of limiting conflicts of interest and promoting accountability? Would expanding confidentiality in voting to other situations help or hinder the effectiveness of the Operating Committee and its Subcommittees in achieving the regulatory objectives of the Plan? Please explain and provide supporting examples and evidence, if available.

297. Do Commenters believe that the size, membership, and tenure of Advisory Committee members is appropriately tailored to encourage the effective accumulation and communication of Advisory Committee member views to the Operating Committee, thereby improving Plan decision-making? If not, why not? Are there other factors that could bear on whether the provisions of the Plan relating to the Advisory Committee will promote better decision-making? If so, what other factors?

298. Are there any alternatives for Advisory Committee involvement that could increase the effectiveness of its involvement? What benefits would these achieve in terms of improving the Operating Committee's efficiency? Would these alternatives increase or decrease costs?

299. What obstacles to information-sharing between individual members of the Operating Committee and the Commission, if any, are likely to limit the Plan's effectiveness in meeting its regulatory objectives? Is there any information, such as regarding individual SRO clock synchronization standards, that members would need to share within the Operating Committee to achieve plan regulatory objectives but may be uncomfortable sharing with one another (or more comfortable sharing with the Commission than with one another)? Please be specific and explain what, if any, changes to the plan could mitigate obstacles from inadequate information-sharing.

300. Are there any other factors relating to the operation and administration of the Plan that the Commission should consider as part of determining whether to approve the Plan? If so, what are those factors and how could they influence the costs and benefits of the Plan? Does the Plan currently address these factors? If not, how could the Plan address these factors and what would be the relative costs and benefits of any changes to the Plan?

F. Costs

As noted above, at the time of the Adopting Release the Commission deferred its economic analysis of the creation, implementation, and maintenance of CAT until after submission of the CAT NMS Plan.[823] Accordingly, the Commission deferred its detailed analysis of costs associated with CAT. In light of the SROs having submitted the CAT NMS Plan, this Section sets forth the Commission's preliminary analysis of the expected costs for creating, implementing, and maintaining the CAT, as well as the associated reporting of data.

As discussed in detail below, the Commission has preliminarily estimated current costs related to regulatory data reporting, anticipated costs associated with building and maintaining the Central Repository, and the anticipated costs to report CAT Data to the Central Repository. These preliminary estimates are calculated from information provided in the CAT NMS Plan as well as supplemental information. Currently, the 20 Participants spend $154.1 million annually on reporting regulatory data and performing surveillance.[824] The approximately 1,800 broker-dealers anticipated to have CAT reporting responsibilities currently spend $1.6 billion annually on regulatory data reporting.[825] If the Plan is approved, the Commission preliminarily estimates that the cost of the Plan would be approximately $2.4 billion in initial aggregate implementation costs and $1.7 billion in ongoing annual costs.[826] Furthermore, the Plan anticipates that market participants would have duplicative audit trail data reporting responsibilities for a period of up to a maximum of 2.5 years, preceding the retirement of potentially duplicative regulatory data reporting schemes.[827] Duplicative audit trail data reporting could cost broker-dealers $1.6 billion per year or more and could cost the Participants up to $6.9 million per year. The Commission preliminarily believes that the primary component of costs for CAT's estimated annual costs would be the estimated aggregate broker-dealer data reporting costs of $1.5 billion per year, whereas the Central Repository build costs are preliminarily estimated by the Participants to be no more than $92 million, with annual operating costs of no more than $135 million.

As explained in detail below, the Commission believes, however, that there is significant uncertainty surrounding the actual implementation costs of CAT and the actual ongoing broker-dealer data reporting costs if the Plan were approved. Methodology and data limitations used to develop these preliminary cost estimates could result in imprecise estimates that may significantly differ from actual costs. The Commission has used its best judgment, however, in obtaining and assessing available information and data to provide the analysis and estimates included in this Notice. The Commission is also requesting comment on the methodology and any additional data Commenters believe should be considered.

Furthermore, the Commission notes that because some CAT design decisions (such as setting forth detailed Technical Specifications) have been deferred until the selection of the Plan Processor, the associated cost uncertainties could cause the actual costs to vary significantly from the estimates set forth in this analysis.

The Commission notes that the cost estimates set forth in this analysis are updated from the cost estimates provided in the Proposing Release. In the Proposing Release, the Commission estimated $4.3 billion in initial implementation costs and $2.3 billion in ongoing annual costs.[828] The

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[822] *See* CAT NMS Plan, *supra* note 3, at Section 5.1(b)(v).

[823] *See* Adopting Release, *supra* note 9, at 45789.

[824] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(B)(1).

[825] *See* Section IV.F.1.c(2), *infra.*

[826] *See* Section IV.F.2, *infra.*

[827] *See id.*

[828] *See* Proposing Release *supra* note 9, at 32596–602. The $4.3 billion and $2.3 billion cost estimates can be calculated using individual cost estimates from the Proposing Release. The Proposing Release expressed some cost estimates on a per-Participant basis. The Plan, however, breaks out costs to

Commission has now updated its analysis and estimates $2.4 billion in initial implementation costs and $1.7 billion in ongoing annual costs. The Commission believes that several factors drive differences in cost estimates from the Proposing Release to the current cost estimates in this analysis. First, the scope of CAT as contemplated in the Proposing Release is different than the scope of CAT Data as would be implemented by the CAT NMS Plan.[829] For example, the Commission notes that, unlike CAT Data envisioned in the Proposing Release, the proposed Plan includes OTC Equity Securities, which if included in CAT would facilitate the possible retirement of OATS as an audit trail data reporting system at a relatively earlier date. While the Commission's cost estimates do not explicitly incorporate cost savings from systems retirement, cost estimates provided in the Plan and based on surveys of broker-dealers, participants and service providers may reflect some of these savings. For example, because respondents anticipate incorporating resources that would be devoted to OTC equity data reporting to CAT reporting, cost estimates may be lower than they would be if OTC equity data were excluded from CAT but were still reported to OATS on an ongoing basis. Thus, after all CAT Reporters start reporting to the Central Repository and the resolution of any data gaps between OATS and CAT, FINRA would not need to maintain OATS solely to fulfill its regulatory responsibilities relating to OTC Equity Securities.[830] Additionally, the Commission's updated cost estimates are based on data submitted with the Plan, which was unavailable when the Commission first estimated the costs of CAT in the Proposing Release,[831] as well as certain additional information obtained by Commission Staff.[832] Furthermore, the Plan also integrates exemptive relief extended to the Participants regarding (1) Options Market Maker quotes; (2) Customer-IDs; (3) CAT-Reporter-IDs; (4) linking of executions to specific subaccount allocations on Allocation Reports; and (5) time stamp granularity for Manual Order Events. The Commission preliminarily believes that this exemptive relief contributes to reductions in cost of the Plan relative to those estimated in the Proposing Release. The Commission has incorporated this additional information into its current cost analysis.[833]

1. Analysis of Expected Costs

The Plan provides estimates of the expected costs associated with the Plan, including costs to build and operate the Central Repository and costs to Participants and CAT Reporters to implement and maintain CAT reporting.[834] As explained below, the Commission has thoroughly reviewed the cost estimates contained in the Plan and other relevant information to develop the Commission's preliminary estimate of expected costs of the Plan. The Commission preliminarily believes that in some cases the estimates provided in the Plan are reliable estimates of the potential costs of certain aspects of the Plan. The Commission preliminarily believes, however, that in other cases the data and methodology underlying certain Plan estimates are unreliable and, in such cases, the Commission has preliminarily evaluated and provided separate estimates based on alternative data or a different methodology.[835]

In this Section, the Commission provides preliminary estimates of the individual elements that constitute the estimated expected total cost associated with implementing and maintaining the CAT, including the costs of operating and building the Central Repository, the costs to Participants, the costs to broker-dealers, and other costs considered in the CAT NMS Plan.

a. Costs of Building and Operating the Central Repository

The Plan's estimates of the costs to build the Central Repository are based on Bids that vary in a range as high as $92 million. The Plan's estimates of annual operating costs are based on Bids that vary in a range up to $135 million. The eventual magnitude of Central Repository costs is dependent on the Participants' selection of the Plan Processor, and may ultimately differ from estimates discussed in the Plan if Bids are revised as the bidding process progresses. The Plan discusses these costs both as (i) one-time and ongoing costs as well as (ii) a five-year total cost, to help evaluate economic trade-offs between initial build costs and operating costs. The Plan anticipates that Participants and their members would bear the costs of building and operating the Central Repository. The Commission preliminarily believes that these estimates are reliable because they are the result of a competitive bidding process, although the Commission recognizes that the Bids are not legally binding on bidders. In particular, the Commission preliminarily believes that a Bidder would not likely decline a

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Participants by (i) single-exchange-operating Participants and (ii) Affiliated Participants that operate multiple exchanges. To validly compare the Commission's preliminary cost estimates to the cost estimates set forth in the Plan, the Commission's analysis aggregates costs to all Participants for these cost estimates. The Proposing Release anticipated 1,114 SRO members would report data to the Central Repository directly, and 3,006 broker-dealers would report data through a service provider. The Plan anticipates that approximately 1,800 broker-dealers would have CAT reporting obligations; the Commission preliminarily believes that the majority of these broker-dealers would rely on service bureaus to perform their regulatory data reporting. Again, to validly compare the different cost estimates, the Commission aggregates the cost estimates across all broker-dealer CAT Reporters.

[829] Similarly, in the Adopting Release, the Commission explained that "the methodology that the Commission used in the Proposing Release to estimate the costs of creating, implementing, and maintaining a consolidated audit trail may no longer be suitable" and that certain "assumptions may no longer be valid since several of the specific technical requirements underlying the Proposing Release's approach have been substantially modified." *See* Adopting Release, *supra* note 9, at 45781.

[830] If FINRA were unable to retire OATS, the costs of duplicative reporting (discussed in Section IV.F.2, *infra*), would continue indefinitely. The Commission preliminarily believes this outcome is unlikely because the Plan discusses the Participants' plans to retire OATS if the Plan is approved. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9.

[831] *See* Proposing Release, *supra* note 9, at 32601–02.

[832] As discussed further below, the Commission's analysis also incorporates data obtained from FINRA and information from discussions with broker-dealers and service bureaus arranged by FIF and staff. *See infra* notes 880 and 899.

[833] The Commission's revised cost estimates are generally substantially lower than those presented in the Proposing Release. *See* Proposing Release, *supra* note 9, at 32601–02. The Proposing Release's estimate of total industry implementation costs is 40.45% higher than the current estimate, and the Proposing Release's estimate of ongoing total industry costs is 57.99% higher than the current estimate. Reductions in cost estimates are primarily driven by lower broker-dealer implementation and ongoing reporting costs that are largely attributable to a reduction in the number of broker-dealers anticipated to incur CAT reporting responsibilities, as the Proposing Release assumed that all 4,120 broker-dealers would be CAT Reporters but the Plan estimates that only 1,800 broker-dealers would incur CAT reporting responsibilities. The Proposing Release also presented higher estimates of the number of broker-dealers that are likely to be insourcers; these broker-dealers have significantly higher implementation and ongoing costs that outsourcing broker-dealers. The Proposing Release estimated Central Repository implementation costs that are 23.33% higher than current estimates; ongoing Central Repository costs were lower by 33.56%; SRO implementation costs were 82.21% higher in the proposing release; SRO ongoing costs were estimated to be 31.79% lower than current estimates. The Proposing Release did not recognize costs to Service Bureaus related to CAT.

[834] Because the Plan does not provide data that permit partitioning costs associated with the Central Repository between Participants and broker-dealer CAT Reporters, this analysis discusses the Central Repository costs separately.

[835] For example, the Commission preliminarily believes that cost estimates in the Plan relating to the costs that would be borne by broker-dealers are unreliable due to limitations of certain survey response data. These limitations and the Commission's alternative cost estimate are discussed in detail below. *See* Section IV.F.1.c, *infra*.

contract to be Plan Processor that was based on the Bid it submitted because that Bidder might lose future business due to reputational consequences of its actions. Furthermore, Bidders have invested considerable time and effort in evaluating the RFP and preparing their Bids and thus if a Bidder were unwilling to serve as Plan Processor according to the terms outlined in its Bid, the time and effort expended to prepare the Bid would be wasted resources. As explained further below, however, the Commission believes that these cost estimates associated with building and operating the Central Repository are subject to a number of uncertainties.

To estimate the one-time total cost to build the Central Repository, the Plan uses the Bids of the final six Shortlisted Bidders.[836] The Bidders' implementation cost estimates range from $30 million to $91.6 million, with a mean of $53 million and a median of $46.1 million.[837] The Plan also estimates the ongoing costs of the Central Repository. The Bids of the final six Shortlisted Bidders estimate annual costs to operate and maintain the Central Repository range from $27 million to $135 million, with a mean of $51.1 million and a median of $42.2 million.[838] The Plan's summary statistics show that annual costs are not expected to be constant year-over-year for all Bidders, but the Plan does not provide further details on how the costs are expected to evolve over time or how many of the Bids have time-varying annual costs.[839] Although the Commission preliminarily believes that costs provided by Bidders are reliable, the Commission recognizes that these ongoing costs could increase over time due to inflation or changes in market structure such as a significant increase in message traffic. It is also possible these costs could decrease due to improvements in technology, reductions in message traffic, and innovation by the Plan Processor.

The Plan also provides information based on the Bids on the total five-year operating costs for the Central Repository because the annual costs to operate and maintain the Central Repository are not independent of the build cost. In particular, it is plausible that the Bidders with the lowest build costs trade off lower build costs for higher recurring annual costs. To account for this possibility, the Plan presents the range of total five-year costs across Bidders using the Bids of the final six Shortlisted Bidders.[840] The methodology takes the sum of the annual recurring costs over the first five years (discounted to the present with a discount rate of 2%) and adds the upfront investment. Across the six Shortlisted Bidders, the total five-year costs to build and maintain CAT range from $159.8 million to $538.7 million.[841] This information is less granular than other Bidder cost information provided in the Plan, and no mean or median is provided or can be calculated with the information provided.

The Plan provides that costs associated with building and operating the Central Repository would be borne by both Participants and their members.[842] In particular, the Plan provides for fixed-tiered fees based on ranges of activity levels to be levied on Execution Venues (*i.e.*, the Participants (including a national securities association with trade reporting facilities, and ATSs)) based upon the Execution Venue's market share of share volumes, with options and equity venue fees determined by separate schedules set by CAT's Operating Committee.[843] Furthermore, the Plan provides for fixed-tiered fees for Industry Members (broker-dealers) based on the message traffic generated by the member, including message traffic associated with an ATS operated by the member.[844] The Plan also provides for the establishment of other fees for activities such as late, inaccurate, or corrected data submission by CAT Reporters.[845] The Plan does not present information on the potential magnitude of these fees, but the Commission preliminarily believes they are likely to be a minor expense for CAT reporters, who should be able to avoid these fees by fulfilling their normal reporting responsibilities under the Plan. The Plan does not provide information on the relative allocation of these fees between transaction-based fees, message traffic-based fees, and other fees.[846]

The Commission believes that a range of factors would drive the ultimate costs associated with building and operating the Central Repository and who would bear those costs. The Plan explains that the major cost drivers identified by Bidders are (1) transactional volume, (2) technical environments, (3) likely future growth in transactional volumes, (4) data archival requirements, and (5) user support/help desk resource requirements.[847] The Plan does not present information on how sensitive the cost estimates are to each of these factors. Further, how Bidders propose to satisfy the RFP requirements could materially affect the ultimate cost to the industry to operate the Central Repository and who would bear those costs. For instance, some Bids may provide more extensive user support from the Plan Processor than others, effectively shifting user support costs from CAT Reporters to the Plan Processor, where such support might be more efficiently provided. However, the Plan does not provide information about how the Bidders propose to address each of the RFP requirements; thus, uncertainties exist around who would bear certain costs and how such costs could change if each Bidder's proposal related to these factors change.

The Commission is mindful that the cost estimates associated with building and operating the Central Repository are subject to a number of additional uncertainties. First, the Participants have not yet selected a Plan Processor, and the Shortlisted Bidders have submitted a wide range of cost estimates for building and operating the Central

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[836] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B). The Plan does not reflect any more specific cost ranges that result from narrowing the range of Bidders from six to three. *See supra* note 35.

[837] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B).

[838] *Id.*

[839] *Id.*

[840] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B). The five-year presentation of Central Repository costs is converted into implementation and annual costs by using the maximum build cost and maximum annual operating cost over the five year period in the Bids. The Commission preliminarily believes that this presentation is conservative in the sense that it avoids underestimating the Central Repository costs that must be borne by industry. However, the Commission preliminarily believes that it is likely that this presentation overestimates the actual Central Repository costs because most individual Bids forecast variation in operating expenses year by year, with costs in some years lower than the maximum used in this presentation. Because the Central Repository costs are, in aggregate, significantly lower than the aggregate costs broker-dealers would incur in reporting CAT Data, the Commission preliminarily believes that this overestimation would not materially affect the magnitude of aggregate costs for the Plan to industry.

[841] *See supra* note 836, and CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B).

[842] *See* CAT NMS *Plan, supra* note 3, at Section 11.

[843] *See id.* at Section 11.3.

[844] *See id.* at Section 11.3(b).

[845] *See id.* at Section 11.3(c).

[846] The economic analysis treats estimates of costs associated with building and operating the Central Repository separately from estimates of costs to Participants and other CAT Reporters to report CAT Data. While the costs of building and operating the Central Repository would be borne by the Participants and Industry Members, the allocation of the costs between and among those entities would be determined by the CAT Funding Model, which has not yet been finalized. *See* Section IV.C.2, *supra*. However, these costs are included in the Commission's estimate of the total costs to industry if the Plan is approved.

[847] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B).

Repository. Second, the Bids submitted by the Shortlisted Bidders are not yet final. Participants could allow Bidders to revise their Bids before the final selection of the Plan Processor. Third, neither the Bidders nor the Commission can anticipate the evolution of technology and market activity with complete prescience. Available technologies could improve such that the Central Repository would be built and operated at a lower cost than is currently anticipated. On the other hand, if anticipated market activity levels are materially underestimated, the Central Repository's capacity could need to increase sooner, increasing the actual costs to operate the Central Repository than currently anticipated in the Bids. The Commission notes that costs to build and operate the Central Repository are relatively small compared to total industry costs if the CAT NMS Plan were approved; consequently, the Commission preliminarily believes that these uncertainties are unlikely to materially affect the final cost of the Plan to industry, if it is approved.

b. Costs to Participants

The Commission preliminarily believes that the Plan's estimates for Participants to report CAT Data are reliable because all of the SROs provided cost estimates, and most SROs have experience collecting audit trail data as well as expertise in the both the requirements of CAT as well as their current business practices. The Plan provides estimated costs for the Participants to report CAT Data.[848] These estimates are based on Participant responses to the Costs to Participants Study ("Participants Study")[849] that the Participants collected to estimate SRO CAT-related costs for hardware and software, full-time employee staffing ("FTE costs"), and third-party providers.[850] Respondents to the Participants Study also estimated the costs associated with retiring current regulatory data reporting systems that would be rendered redundant by CAT.[851]

The Plan estimates costs for the Participants as an aggregate across all Participants (the six single-license Participants and the five Affiliated Participant Groups).[852] The implementation cost estimate for Participants is $17.9 million, including $770,000 in legal and consulting costs and $10.3 million in full-time employee costs for operational, technical/development, and compliance-type functions.[853] Annual ongoing costs are estimated to be $14.7 million, including $720,000 in legal and consulting costs and $7.3 million in full-time employee costs.[854] Other than legal and consulting costs and full-time employee costs, the Plan does not specify the other categories of implementation and ongoing costs, but based on discussion with the Participants, the Commission preliminarily believes that much of the remaining costs would be attributed to IT infrastructure, including hardware and software costs.

The Plan also provides estimates of the costs Participants currently face in reporting regulatory data.[855] The Plan anticipates that some, but not all, of these reporting systems would be retired after implementation of the Plan.[856] The Plan reports that aggregate annual costs for current regulatory data reporting systems are $6.9 million across all Participants.[857]

In addition to data reporting costs, Participants face costs associated with developing and implementing a surveillance system reasonably designed to make use of the information contained in CAT Data as required by Rule 613(f).[858] The Plan provides estimates of the costs to Participants to implement surveillance programs using data stored in the Central Repository. Participants would incur expenses, including full-time employee ("FTE"), legal, consulting and other costs to adapt their surveillance systems to utilize data in the Central Repository. The Plan provides an estimate of $23.2 million to implement surveillance systems for CAT, and ongoing annual costs of $87.7 million.[859] The Plan does not provide information on why Participants' data reporting costs would substantially increase if the Plan were approved, nor does it provide information on why surveillance costs would decrease.

The Commission preliminarily believes the data reporting cost estimates are reasonable because the Commission expects that Participants would be required to implement new technology infrastructure to report data to the Central Repository and support specialized personnel to maintain this infrastructure and respond to inquiries from the Plan Processor and users of CAT Data. The Commission likewise preliminarily believes that the surveillance cost estimates are reasonable, even though the annual estimate of $87.7 million is lower than the $147.2 million Participants, in aggregate, currently spend on surveillance programs annually[860] because Participants could realize efficiencies from having data standardized and centrally hosted that could allow them to handle fewer ad hoc data requests. In addition, the Plan could allow Participants to automate some surveillance processes that may currently be labor intensive or processed on legacy systems, which could reduce costs because the primary driver of these costs is FTE costs.

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[848] *See id.* at Appendix C, Section B.7(b)(iii)(B)(2). In addition to the costs the Participants would incur implementing and maintaining CAT, the Participants would also incur and would continue to incur costs associated with developing the CAT NMS Plan. The Participants estimate such costs to be $8,800,000. The Commission does not include these costs in its estimates of the costs associated with CAT if the CAT NMS Plan is approved because these costs have already been incurred and would not change regardless of whether the Commission approves or disapproves the CAT NMS Plan. Further, the Commission assumes that the CAT NMS Plan's implementation cost estimates include any additional CAT NMS Plan development costs that would be incurred by Participants if the CAT NMS Plan were approved.

[849] The Participants Study delineates Participant responses into two groups. The first group consists of affiliated Participants, which includes single entities that hold self-regulatory licenses for multiple exchanges. The second group consists of Participants that hold a single self-regulatory license, including FINRA, the sole national securities association. *Id.* at Appendix C, Section B.7(b)(i)(A)(1).

[850] Third-party provider costs are generally legal and consulting costs but may include other outsourcing. The template used by respondents is *available at http://catnmsplan.com/PastEvents/* under the Section titled "6/23/14" at the "Cost Study Working Template" link.

[851] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2).

[852] *Id.* at Appendix C, Section B.7(b)(iii)(B)(2).

[853] *Id.*

[854] *Id.*

[855] *Id.*

[856] *Id.* As required by Rule 613(a)(1)(ix), 17 CFR 242.613(a)(1)(ix), the CAT NMS Plan includes a plan to eliminate existing rules and systems that would be rendered duplicative under CAT. *Id.* at Appendix C, Section C.9. Among other things, this plan requires that within 18 months after Industry Members are required to begin reporting data to the Central Repository, each Participant will complete an analysis of whether its rules and systems related to monitoring quotes, orders, and executions collect information that is not rendered duplicative by CAT. *Id.* Each Participant must also analyze whether any such non-duplicative information should continue to be separately collected, incorporated into CAT, or terminated. *Id.* Therefore, depending on the results of these analyses, some existing regulatory reporting systems may continue to be in place after the implementation of CAT.

[857] *Id.* at Appendix C, Section B.7(b)(ii)(B)(1).

[858] *See* 17 CFR 242.613(f).

[859] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2). Rule 613 requires the SROs to file updated surveillance plans within 14 months of CAT implementation. 17 CFR 242.613(f). The Commission assumes that the CAT NMS Plan's estimate is limited to adapting current surveillance programs to the Central Repository. The Commission believes this is a conservative assumption because if other expenses were included in the estimate, the Commission would be overestimating the costs Participants would incur to implement and operate CAT if the CAT NMS Plan is approved.

[860] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(B)(1).

Table 6 summarizes the Participants' estimated costs, both current and CAT-related, that are set forth in the Plan. Currently, Participants spend approximately $154 million per year on data reporting and surveillance activities. The Participants estimate that they would incur $41 million in CAT implementation costs, and $102 million annually in ongoing costs to report CAT Data and perform surveillance as mandated under Rule 613.

TABLE 6—PARTICIPANTS' COST ESTIMATES

	Current	CAT implementation	CAT ongoing
Data Reporting	$6,900,000	$17,900,000	$14,700,000
Surveillance	147,200,000	23,200,000	87,700,000
Total	154,100,000	41,100,000	102,400,000

c. Costs to Broker-Dealers

(1) Estimates in the Plan

The Plan estimates total costs for those broker-dealers expected to report to CAT. In particular, the Plan relies on the Costs to CAT Reporters Study ("Reporters Study"), which gathered from broker-dealers the same categories of cost estimates used in the Participants Study—*i.e.,* the hardware and software costs, full-time employee staffing costs, and third-party provider costs that CAT Reporters would incur if the Commission approves the Plan.[861] The Reporters Study surveyed broker-dealers to respond to two distinct approaches for reporting CAT Data to the Central Repository.[862] Approach 1 assumes CAT Reporters would submit CAT Data using their choice of industry protocols. Approach 2 assumes CAT Reporters would submit data using a pre-specified format. The Participants distributed the Reporters Study to 4,406 broker-dealers and received 422 responses, of which the Participants excluded 180 deemed materially incomplete and 75 determined to be erroneous.[863] The Plan's cost estimate calculations are based on the remaining 167 responses. In aggregating the cost estimates across all broker-dealers expected to report CAT Data to the Central Repository, the Plan assumed that the characteristics of survey respondents (firm size and OATS reporting status) were representative of the approximately 1,800 broker-dealers expected to have CAT reporting obligations.[864]

Based on the Reporters Study survey data, the Plan estimates implementation costs of less than $740 million for small firms[865] and approximately $2.6 billion for large firms, for a total of $3.34 billion in implementation costs for broker-dealers.[866] For annual ongoing costs, the Plan estimates costs of $739 million for small firms and $2.3 billion for large firms, for a total of $3.04 billion in annual ongoing costs for broker-dealers.[867] For both large and small broker-dealers, the Plan suggests that the primary cost driver for projected CAT reporting costs for broker-dealers is costs associated with full-time employees.[868] For the reasons discussed below, the Commission preliminarily believes that the broker-dealer cost estimates in the Plan are in part unreliable, based on limitations with the Plan's underlying data in estimating costs. As discussed below, the Commission preliminarily believes that cost estimates in the Plan for large broker-dealers may be reliable, and the Commission has incorporated large firm data from the Plan into the Commission's estimates outlined below.[869]

The Commission preliminarily believes, however, that the cost estimates for small broker-dealers provided in the Plan, which are based upon responses set forth in the Reporters Study, do not prove reliable estimates of smaller CAT Reporter costs for a number of reasons. First, some respondents classified as small in the Reporters Study appear to have responded numerically with incorrect units, with such responses resulting in annual estimated cost figures that would be 1,000 times too large. Second, maximum responses in certain categories of costs suggest that some large broker-dealers may have misclassified themselves as small broker-dealers.[870] Third, methods used to remove outliers are likely to have introduced significant biases. Finally, the response rate to the Reporters Study survey was low and is likely to have oversampled small broker-dealers who currently have no OATS reporting obligations.[871]

First, the Commission preliminarily believes that the respondents to the Reporters Study survey are likely to have used different units in their responses and that the survey precision is materially affected because inconsistent use of reporting units across respondents introduces an upward bias to the Reporters Study's findings. The survey collected cost estimates in $1,000 increments; however, there is evidence that some respondents did not provide estimates in $1,000 increments as requested. Rather, survey results in the Plan reveal, for example, that one small firm reported current annual hardware/software costs for current regulatory data reporting to be $14,000,000 per year.[872] Because small firms responding to the survey by definition have no more than $500,000 in total capital, an annual $14,000,000 estimate for hardware/software costs for current data reporting seems unreasonable.[873] Furthermore, a small survey respondent cited $3,500,000 in hardware/software retirement of systems costs, which seems unreasonable for a broker-dealer with less than $500,000 in total capital. These are only a few examples, but they raise the question of how many other respondents recorded incorrect units in their responses, particularly if screening methodologies have difficulty detecting such incorrect units. In light of these unreasonable results, the Commission preliminarily believes that the Plan's cost estimates for small broker-dealers reporting data to CAT has an upward bias because some firms did not correctly respond to the survey in $1,000 increments.

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[861] *See id.* at Appendix C, Section B.7(b)(i)(A)(2).

[862] *See id.*

[863] *See id.*

[864] Not all broker-dealers are expected to have CAT reporting obligations; the Participants report that approximately 1,800 broker-dealers currently quote or execute transactions in NMS Securities, Listed Options or OTC Equity Securities and would likely have CAT reporting obligations. The Commission understands that the remaining 2,338 registered broker-dealers either trade in asset classes not currently included in the definition of Eligible Security or do not trade at all (*e.g.,* broker-dealers for the purposes of underwriting, advising, private placements). The Plan describes the process of determining that 1,800 broker-dealers would report to the Central Repository in Appendix C. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(B)(2).

[865] Survey respondents were instructed to classify themselves as "small" if their Total Capital (defined as net worth plus subordinated liabilities) was less than $500,000. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(C) n.188. This is consistent with the definition of "small business" or "small organization" used with reference to a broker or dealer for purposes of Commission rulemaking in accordance with provisions of Chapter Six of the Administrative Procedure Act (5 U.S.C. 601 *et seq.*). *See* 17 CFR 240.0–10(c).

[866] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iv)(A)(3).

[867] *Id.*

[868] *See id.* at Appendix C, Section B.7(b)(iii)(C)(2).

[869] While the estimates presented in the Plan assume that the proportion of large versus small broker-dealers that responded to the Reporters Study is representative of the relative number of large versus small broker-dealers that are expected to incur CAT reporting obligations, the Commission's cost estimates do not embed this assumption. Instead, the Commission relies on data from FINRA to determine which firms are likely to outsource, and models those firms' costs based on information gleaned from FIF-organized discussions with industry. This is discussed further below, but this estimation results in relatively fewer firms' costs being estimated using "large" firm cost estimates presented in the Plan.

[870] The Plan presents summary statistics such as average, median and maximum for each survey response. *See* CAT NMS Plan *supra* note 3, at Appendix C, Section B(7)(b)(ii)(C), Table 5. In the left most column, $14 million is the maximum response for "Hardware/Software Current Cost."

[871] In reaching these preliminary conclusions, the Commission reviewed the detailed discussions of the Reporters Study survey methodology in the Plan and the survey form and instructions provided to respondents. *See* 6/23/14 entry on CAT NMS Plan Web site, *available at http://www.catnmsplan.com/pastevents/index.html.* The Commission staff also discussed with the Participants potential methodology adjustments in aggregating the CAT Reporters Study data. After Commission staff discussions with the Participants, the Commission concluded that no methodology could address these fundamental issues with the survey data.

Because of errant responses of this type, the Plan recommends using medians instead of averages;[874] however, for nearly all estimated cost categories in the Reporters Study, the median response was zero, which the Commission believes underestimates the costs that CAT Reporters are likely to face in most categories of costs. Consequently, the Commission is unable to adjust for these biases.

In addition, the Commission preliminarily believes that the small firm cost survey information in the Reporters Study is unlikely to be representative of the small broker-dealers that would have CAT reporting responsibilities in part because the Commission also believes preliminarily that some survey respondents misclassified their firm's size, which renders the Plan's separate presentation of results for large and small broker-dealers imprecise. In particular, the Commission believes that at least one large firm misclassified itself as a small firm. The CAT NMS Plan Table 6 reveals that one firm designated as a small firm responded to the Reporters Study survey with it having 68 full-time employees dedicated to performing regulatory data reporting activities for a yearly cost of $27,300,000.[875] The Commission believes, however, that a firm with 68 full-time employees reporting regulatory data could not be small (again, as defined by the survey to include firms with less than $500,000 in total capital) because such a firm would lack the working capital to support that level of employee expense.[876] The presence of large-firms with significantly higher costs in the small-firm sample significantly biases the small-firm cost estimates upward.

Moreover, the Commission preliminarily believes that the methodologies implemented to remove outliers in the Reporters Study introduce cost estimate biases.[877] Based on discussions with the Participants, the Commission understands that to identify and remove outliers, the Participants first determined if each survey item's maximum response was a potential outlier because it was more than twice the value of the next highest response; the Participants then individually reviewed potential outliers and omitted those deemed errant. While the Commission recognizes that this methodology may mitigate the precision bias discussed above by removing a single response that is 1,000 times too high, it may not remove such outliers when two or more firms errantly report values 1,000 times too high, in which case an upward bias to the cost estimates would remain. Furthermore, if one firm genuinely incurs expenses that are more than twice those of the next highest respondent, such survey response might be removed under this methodology, even though such a response may accurately identify expenses expected by the respondent, which in turn introduces a downward bias to the cost estimates. For example, only 21 large OATS reporting firms are represented in the Reporters Study survey responses. If most of these 21 firms perform the majority of their regulatory data reporting functions in house, but one firm outsources all of its regulatory data reporting, that single firm could have outsourcing costs far higher than its peers. Under the Plan's cost estimate methodology, this outsourcing response in the Reporters Study might be removed as an outlier, unless another large, OATS reporting firm responded to the Reporters Study with at least half of the outsourcing costs. The Commission considered whether to request that the Participants provide updated cost estimates under a methodology that did not remove Reporters Study outlier responses, but the Commission preliminarily believes that this approach would exacerbate the precision problem discussed above and possibly increase the number of errant responses that are 1,000 times too high to the cost estimate data set.

Finally, the Commission believes that the Reporters Study response rate is not adequate to be representative of the population of broker-dealers that would report to CAT. The survey was delivered to 4,025 broker-dealers. After removing erroneous and materially incomplete responses, only 167 responses remained of the 4,025 broker-dealers who were sent the survey. To be representative of the broker-dealers that would report to CAT, a final response rate of 4.15% seems low considering the diversity of these broker-dealers. The majority of broker-dealers are small and smaller broker-dealers are diverse along many dimensions relevant to the likely magnitude of their expected CAT costs, including business practices; tendency to centralize technology; specialization in market segments, such as options versus equities; and the range of products and markets in which individual broker-dealers participate. Because broker-dealer diversity is great, a survey of expected broker-dealer costs would ideally have a higher response rate to ensure a representative sample. Furthermore, of the 167 responses incorporated into the Plan's cost estimates, 118 respondent firms were classified as small in the Reporters Study, and 88 of these 118 small firms were identified as having no current OATS reporting responsibilities.[878] The Commission preliminarily believes that small firms that anticipate limited CAT reporting responsibilities may have been oversampled by the Reporters Study survey because for nearly all categories of cost estimates, the median small firm response was zero, suggesting that they do not expect to have CAT reporting responsibilities. Consequently, the

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[872] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.(7)(b)(ii)(C), Table 5.

[873] The Plan notes that it is possible that the firm intended to report that it had $14,000 in annual expenses for hardware/software. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(C), n.193.

[874] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7.(b)(ii)(C), n.194.

[875] *See id.* at Appendix C, Section B.(7)(b)(ii)(C), Table 6.

[876] *See id.* at Appendix C, Section B.7.(b)(i)(C), n.188.

[877] *See id.* at Appendix C, Section B.7.(b)(i)(B)(ii)(C).

[878] Small firms may have no OATS reporting responsibilities because they do not engage in activities that would incur OATS reporting obligations, or they may be excluded or exempted under FINRA's OATS reporting rules. *See* Section IV.D.2.b(1)A, *supra*.

Commission preliminarily believes that the small firms that responded to the study cannot be statistically representative of the small firms that would incur CAT reporting obligations, because the Commission believes that most small broker-dealers would incur significant costs in reporting to CAT.[879] These costs are estimated below.

Although the Commission has preliminarily concluded that the small broker-dealer cost estimates presented in the Plan are unreliable, the Commission also preliminarily believes that the cost estimates in the Plan for large broker-dealers may be reliable. The Commission preliminarily believes that problems with the Reporters Study data are less likely to affect the Plan's large broker-dealer cost estimates for several reasons. First, if a large broker-dealer were to respond to the Reporter Study survey with the incorrect level of units (resulting in estimates that were 1,000 times too large as was the case for some small broker-dealer responses), then these errant cost survey responses would result in estimates that likely would be denominated in billions of dollars. The maximums presented in the Plan's tables describing the Reporters Study data do not include responses denominated in billions; notably, under the Plan's cost estimate methodology, if such responses were generated, these responses likely would have been removed as outliers. Second, although it is possible that small broker-dealers misclassified themselves as large broker-dealers in the Reporters Study data, such misclassification does not seem to have biased the cost estimate results for large broker-dealers to the degree that the Commission preliminarily believes has occurred for the small broker-dealer Reporters Study data. Cost estimates for large broker-dealers, particularly those that do not have current OATS reporting obligations, are not inconsistent with information gathered by the Commission in discussions with broker dealers and service providers,[880] although the Commission preliminarily believes that averages presented in the Plan generally fall between the expenses that a very large and complex broker-dealer would experience and those of a more typical broker-dealer in the same category. For example, the Plan estimates that the average large OATS-reporting broker-dealer currently spends $8.7 million annually to comply with current data reporting requirements.[881] The Commission preliminarily believes that this estimate is likely to be substantially lower than the actual data reporting costs incurred by the largest and most complex broker-dealers that currently report to OATS; these very large and complex firms are assumed to spend far more than this estimate. There are, however, only a limited number of exceptionally large OATS-reporting broker-dealers. Similarly, the Plan's estimate is likely to significantly overestimate the costs incurred by the majority of firms classified as large by the Plan because most large firms are not as large or as complex as these limited number of exceptionally large broker-dealers. Summary statistics on activity levels of OATS reporting firms are discussed in detail below.

The Plan presents cost estimates for large broker-dealers' current regulatory data reporting costs and costs they would incur to implement and maintain CAT Data reporting. The Plan estimates that an OATS-reporting large broker-dealer has current data reporting costs of $8.7 million per year.[882] A non-OATS reporting large broker-dealer is estimated to spend approximately $1.4 million annually.[883] The Plan estimates that OATS-reporting large broker-dealers would spend approximately $7.2 million to implement CAT Data reporting, and $4.8 million annually for ongoing costs.[884] For non-OATS reporting large broker-dealers, the Plan estimates $3.9 million in implementation costs and $3.2 million in annual ongoing costs.[885] According to the Plan, the magnitude of each of these cost estimates is primarily driven by FTE costs.

(2) Commission Cost Estimates

The Commission's broker-dealer cost estimates incorporate some broker-dealer data from the Plan, but to address issues in the Plan's Reporters Study data, the Commission's cost estimates also include other data sources.[886] As previously discussed, the Commission preliminarily believes that the small firm cost estimates presented in the Reporters Study are unreliable. As a result, the Commission has re-estimated the costs that broker-dealers likely would incur for CAT implementation and ongoing reporting. As with the Plan's cost estimates, the Commission's re-estimation relies on classifying broker-dealers based on whether they currently report OATS data. However, the re-estimation further classifies broker-dealers, as in the Commission's cost estimates presented in the Proposing Release, based on whether the firm is likely to use a service bureau to report its regulatory data, or, alternatively, whether the firm might choose to self-report its regulatory data. In this updated analysis, the Commission preliminarily estimates that the 1,800 broker-dealers expected to incur CAT reporting obligations currently spend approximately $1.6 billion annually to report regulatory data.[887] If the CAT NMS Plan is approved, the Commission preliminarily believes that these broker-dealers would incur approximately $2.2 billion in implementation costs and $1.5 billion in ongoing data reporting costs.[888]

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[879] The Commission notes that small firms currently excluded from OATS reporting due to their size would have CAT reporting responsibilities under the Plan because the Plan makes no provision to exempt or exclude them, as FINRA does with OATS reporting. The Commission preliminarily believes that these firms are likely to experience higher implementation costs than other small firms because CAT reporting would likely necessitate establishing business relationships with service providers if they do not already have such relationships. The Commission preliminarily believes that most small firms that would have CAT reporting obligations but do not currently have OATS reporting obligations would not have the IT and regulatory personnel infrastructure to accomplish this reporting in-house. The Commission's estimation of these firms' costs to implement CAT includes higher estimates of employee costs to implement CAT to account for this increased burden.

[880] FIF arranged a group discussion with a small number of broker-dealers whose identities were not provided to Commission staff and individual discussions with five service bureaus whose identities were not provided to Commission staff. Also, staff arranged individual discussions with five additional broker-dealers. When market participant identities were unknown, FIF provided demographic information that allowed Commission staff to gauge a firm's size, complexity, and general market activities. Broker-dealers outside of the group discussion and service bureaus were asked for specific cost information that related to their regulatory data reporting costs; most broker-dealers and some service bureaus shared general estimates, particularly of staffing levels, and provided information on cost drivers and obstacles that firms face in accomplishing their regulatory data reporting, particularly challenges that they face in implementing changes to these requirements. Most, but not all, firms participating in discussions with Commission staff discussed OATS as their most challenging data reporting requirement. Some firms named LOPR and EBS as additional sources of regular challenges and significant costs. It is our understanding from these discussions, that some data reporting requirements, such as Rule 605 and Rule 606 reporting, are nearly always outsourced.

[881] *See infra* note 882.

[882] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.(7)(b)(ii)(C), Table 3. The $8.7 million figure was calculated by summing the average hardware/software cost, third party/outsourcing cost, and full-time employee costs using the Commission's estimated cost per employee of $424,350.

[883] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.(7)(b)(ii)(C), Table 4. The $1.4 million figure was calculated by summing the average hardware/software cost, third party/outsourcing cost, and full-time employee costs using the Commission's estimated cost per employee of $424,350.

[884] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.(7)(b)(iii)(C)(2)a., Table 9; and at Appendix C, Section B.(7)(b)(iii)(C)(2)b., Table 15.

[885] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.(7)(b)(iii)(C)(2)a., Table 10; and at Appendix C, Section B.(7)(b)(iii)(C)(2)b., Table 16.

[886] Discussions below present information on data obtained from FINRA and gleaned from discussions with broker-dealers and service bureaus arranged by FIF and staff. *See supra* notes 880 and 899.

[887] To the extent that the CAT NMS Plan underestimates the number of broker-dealers that

The Commission preliminarily believes classifying broker-dealers based on their manner of reporting provides a more accurate estimate of the costs firms will incur because, as noted below, costs differ based on whether the firm insources or outsources reporting responsibilities and insourcing/outsourcing does not necessarily correlate with firm size. Accordingly, the Commission begins its estimation of costs using the number of OATS Reportable Order Events ("ROEs") reported by firms that report to OATS. The Commission preliminarily believes that because OATS reportable events, such as order originations, routes, and executions are also CAT Reportable Events, these two measures are likely to be highly correlated, making the number of OATS records a proxy for the anticipated level of CAT reporting.[889] Based on discussions with broker dealers and service providers, however, the Commission preliminarily believes that firms that report high numbers of OATS ROEs decide to either self-report their regulatory data or outsource their regulatory data reporting based on a number of criteria, including potential costs.[890] Thus, simply using the number of OATS ROEs as a proxy for firm size may not provide an accurate picture of the reporting costs for such firms. As a result, the Commission goes a step further in its estimation of costs by segmenting firms into two groups—those that insource and those that outsource their regulatory data reporting—and estimates costs separately for each group. Empirical evidence supporting this approach is detailed further below.[891]

The Plan also separates industry costs of current OATS reporting firms from those that currently have no OATS reporting obligations, recognizing that the group of non-OATS reporting firms are diverse in size and scope of activities. The Commission maintains this approach in its re-estimation, as firms that do not currently report to OATS would face a different range of costs to implement and maintain CAT reporting because firms that currently do not report to OATS may have little to no regulatory data infrastructure in place. Broker-dealers that do not currently report to OATS may have higher or lower costs than firms that do report to OATS, depending on whether they do not report because of SRO membership status or lack of equity market activity or because of size and scope of activity within equity markets. For example, an electronic liquidity provider ("ELP") may trade extensively both on and off-exchange, yet not report to OATS because it is not a FINRA member; such a firm could incur high data reporting costs under CAT because it has a high volume of records to report. Conversely, a small equity trading firm might be excluded or exempted from OATS reporting due to its size and scope of activities; such a firm could have relatively low CAT reporting costs, although still higher than its existing regulatory reporting costs, because it has few Reportable Events and is assumed to outsource its reporting responsibilities. Recognizing this diversity in non-OATS firms, the Commission's re-estimation anticipates a large range of firm activity levels in non-OATS CAT reporters and treats them differently when estimating their costs.[892] This is discussed further below.

In sum, the framework for the Commission's re-estimation is as follows. First, the Commission identifies those OATS-reporting firms that insource ("Insourcers") and those that outsource based on an analysis of the number of OATS reporting ROEs combined with specific data provided by FINRA on how firms report. Furthermore, the Commission identifies firms that do not currently report to OATS but are likely to insource based on their expected activity level by identifying Options Market Makers and ELPs. Based on that analysis, the Commission preliminarily estimates that there are 126 OATS-reporting Insourcers and 45 non-OATS reporting Insourcers; these estimates are discussed further below. The Commission's re-estimation classifies the remaining 1,629 broker-dealers that the Plan anticipates would have CAT Data reporting obligations as "Outsourcers," based on outsourcing practices observed in data obtained from FINRA and discussed further below. The Commission preliminarily believes that most of these firms would accomplish their CAT Data reporting through a service bureau. Next, to determine costs for Insourcers, the Commission relies upon cost estimates for firms classified as "large" in the Reporters Study. For Outsourcers, the Commission uses a model of ongoing outsourcing costs ("Outsourcing Cost Model") to estimate both current regulatory data reporting costs and CAT-related data reporting costs Outsourcers would incur if the CAT NMS Plan were approved.

A. Broker-Dealer Reporting Practices

Although the Commission's analysis segregates broker-dealers into two groups (Insourcers and Outsourcers), within those groups, broker-dealer data reporting methods currently vary widely across firms, and these varied methods affect the data reporting costs that broker-dealers incur. As discussed previously, depending on the business in which broker-dealers participate, broker-dealers can have a wide range of reporting responsibilities.

There are two primary methods by which broker-dealers accomplish data reporting: Insourcing, where the firm reports data to regulators directly; and outsourcing, where a third-party service provider performs the data reporting, usually as part of a service agreement that includes other services. Firms that outsource retain responsibility for complying with rules related to outsourced activity. Based on data from FINRA and conversations with market participants, the Commission preliminarily believes that the vast majority of broker-dealers outsource most of their regulatory data reporting

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would incur CAT reporting obligations, the Commission's updated estimates understate the actual costs Reporters would face if the CAT NMS Plan is approved.

[888] These figures cover only broker-dealer costs. Industry-wide costs are summarized below in Section IV.F.2.

[889] In other words, the Commission preliminarily believes that the higher the number of OATS ROEs reported, the higher the anticipated number of CAT records to report. As noted below, however, the Commission anticipates that the number of CAT records would exceed the number of OATS ROEs.

[890] As explained further below, the Commission believes that firms reporting relatively few OATS ROEs would be unlikely to have the infrastructure and specialized employees necessary to insource regulatory data reporting and would almost certainly outsource their regulatory data reporting functions.

[891] The Commission in its cost calculation uses the number of OATS ROEs as a measure of firm size, rather than traditional measures of firm size based on a single metric, such as capital level, or OTC dollar volume. The Commission preliminarily believes that the use of OATS ROEs provides a more accurate predictor of firm reporting behavior. Data provided by FINRA, for example, reveals that some firms with extremely high levels of OATS reporting activity have relatively low capital levels; furthermore, many firms that report exceptionally high numbers of OATS ROEs have no OTC dollar-volume. *See infra* note 893.

[892] The Commission's re-estimation of costs assumes that firms that are currently excluded or exempted from OATS reporting are Outsourcers. By definition, OATS-reporting Outsourcers report fewer than 350,000 OATS ROEs per month. However, firms that are not FINRA members are not assumed to be Outsourcers; many of these firms are in the business of proprietary trading as ELPs or are Options Market Makers, which are assumed to be typical of large non-OATS reporters discussed in the Plan. The identification of these firms and their estimated costs of CAT reporting are discussed further in Section IV.F.1.c(2)B.i, *infra*.

functions to third-party firms. Data provided by FINRA shows that 932 broker-dealers reported at least one OATS ROE between June 15 and July 10, 2015.[893] Of these 932 firms, 799 reported at least 90% of their OATS ROEs through a service bureau. Broker-dealers generally used a single service bureau (497 firms) to report OATS, but some broker-dealers used multiple service bureaus (up to 9 service bureaus).

Often, service bureaus bundle regulatory data reporting services with an order-handling system service that provides broker-dealers with market access and order routing capabilities. Sometimes regulatory data reporting services are bundled with trade clearing services. A broker-dealer's decision to insource/outsource these functions and services can be complex, and different broker-dealers reach different solutions based on their business characteristics. To illustrate, some broker-dealers self-clear trades but outsource regulatory data reporting functions; some broker-dealers have proprietary order handling systems, self-clear trades, and outsource regulatory data reporting functions. Other broker-dealers outsource order-handling, outsource clearing trades, and self-report regulatory data. The most common insource/outsource service configuration, however, for all but the most active-in-the-market broker-dealers is to use one or more service bureaus to handle all of these functions.

In most, but not all, cases, service bureaus host their client broker-dealer's order-handling system on the service bureau's servers while the broker-dealer has software serving as a "front end" for this system running on the broker-dealers' local IT infrastructure. For broker-dealers whose order-handling systems are thus hosted on their service bureau's servers, their service bureaus would handle many elements of CAT implementation, including clock synchronization. These broker-dealers would still incur some CAT implementation costs because some CAT Data, such as Customer information (including PII), is likely to reside outside of the broker-dealer's order handling system; consequently, such broker-dealers would need to develop technical and regulatory infrastructure to provide such CAT Data to its service bureaus. Further, broker-dealers that outsource could still need to adapt their in-house software systems to address order-management system changes. In addition to the resources needed to reprogram the system, any order-handling system change is likely to require significant staff training. Furthermore, broker-dealers that outsource would need to update their internal monitoring of their service bureau's reporting to ensure it meets the requirements of the Plan.

In discussions arranged by FIF, broker-dealers cited a number of factors that influence a broker-dealer's decision on whether to handle regulatory data reporting in-house. Generally, smaller broker-dealers (with relatively few registered persons and limited capital) do not have the business volume required to support the IT infrastructure and specialized staff that is necessary to perform in-house regulatory data reporting; these broker-dealers may have no business choice but to rely upon third-party service providers to provide order handling and market connectivity, as well as clearing services.[894] For larger broker-dealers, outsourcing is more likely to be a discretionary business decision. In discussions with staff, larger broker-dealers cited a number of reasons to outsource. First, it may be a strategic choice; some broker-dealers view regulatory data reporting as a function that offers no competitive advantages and a costly distraction from other business activities, as long as an alternative solution satisfies reporting requirements. For these firms, compliance might be achieved at a lower-cost in-house, but the firms prefer to outsource the data reporting function to focus key resources on business functions. Second, some broker-dealers outsource these functions to reduce costs associated with demonstrating regulatory compliance. Multiple broker-dealers stated that using a regulatory reporting service that was familiar to regulators allowed more efficient regulatory examinations, because an in-house regulatory reporting system might require more staff time invested in facilitating examinations and demonstrating compliance. Third, some broker-dealers cited that keeping current with regulatory requirements drove their decision to outsource. These broker-dealers may have insourced initially, but they relayed that over time they experienced accelerating regulatory rule changes, which led to an escalation in their compliance costs. For these firms, the pace of regulatory rule changes drove the decision to outsource where they had at one time insourced, because the firm could fulfill its regulatory responsibilities at a lower cost by outsourcing and monitoring the service bureau's compliance.[895]

On the other hand, some broker-dealers choose to insource their regulatory data reporting functions. In discussions arranged by FIF, broker-dealers cited a number of reasons supporting their decision to self-report. First, some broker-dealers cited ancillary benefits to constructing the IT infrastructure necessary to accomplish their regulatory data reporting. Data collected in a central location for regulatory data reporting and the software necessary to manipulate the regulatory data facilitates self-monitoring and business reporting, providing other benefits to the firm. Second, some broker-dealers cited protecting their proprietary strategies as a motivator to self-report regulatory data. These broker-dealers felt that sharing their trading data with a service bureau was potentially too revealing of their proprietary trading strategies. Third, some broker-dealers cited operational complexity as a driver of their insourcing decision. For these very large broker-dealers that traded in a wide range of assets, outsourcing would involve multiple service provider contracts. At least one broker-dealer stated that it did not believe service bureaus could meet all of its requirements due to its complexity. Finally, while some broker-dealers preferred to outsource to reduce the costs of demonstrating compliance, others stated that outsourcing would increase compliance costs because they could not conduct their own compliance checks to ensure the reports comply with relevant regulations.

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[893] The Commission analyzed data on broker-dealer OATS reporting received from FINRA. This data source included the number of OATS ROEs reported by each individual broker-dealer, as well as counts of how many ROEs were reported by the firm directly and how many ROEs were reported through service bureaus, and the number of service bureaus that reported data for the firm. The dataset includes the firms' minimum net capital required and actual net capital as well as the number of registered persons associated with the firm. Factors that affect broker-dealers' insourcing/outsourcing decision are discussed below. Because market activity is highly correlated with volatility, this four-week period was chosen to have a typical level of volatility (as measured by VIX level) for the period September 16, 2010 through September 15, 2015.

[894] In conversations with market participants, several broker-dealers suggested that for very small firms, establishing these service bureau relationships could be difficult. These firms might "piggy back" on another broker-dealer's infrastructure, essentially relying on them to act as an introducing broker. This would generally add another cost layer for these very small firms but could be more cost effective than establishing stand-alone service bureau relationships.

[895] The Commission notes that an Industry Member CAT Reporter remains responsible for compliance with the requirements of the CAT NMS Plan and Rule 613, as reflected in the Compliance Rule of the SRO(s) of which it is a member, regardless of whether it has outsourced some or all of its regulatory data reporting functions to a third party.

Current costs of outsourcing regulatory data reporting vary widely across broker-dealers. Whether data reporting is provided on behalf of a broker-dealer by the provider of an order-management system or another third-party firm, a broker-dealer generally enters into long-term agreements with its service provider to obtain a bundle of services that includes regulatory data reporting, and costs to change service bureaus are high. Furthermore, based on discussions with service providers, the Commission understands that switching service bureaus can be costly and involve complex onboarding processes and requirements, and that systems between service bureaus may be disparate; furthermore, changing service bureaus may require different or updated client documentation.[896] The Commission preliminarily believes that annual costs for provision of an order-handling system (including market connectivity, routing and regulatory data reporting) range from $50,000 to $180,000 annually for very small broker-dealers. Costs for very large broker-dealers that outsource these functions begin at $1 million to 2.4 million annually.[897]

For broker-dealers that perform regulatory data reporting in-house, implementation costs are likely to vary widely. Some very large broker-dealers that self-report regulatory data have a centralized IT infrastructure and trade in relatively few asset classes. Some of these broker-dealers carry no customer accounts, simplifying their regulatory data reporting obligations. The Commission preliminarily believes that such broker-dealers could incur relatively low CAT implementation costs because they have a centralized IT infrastructure that captures all broker-dealer activity and specialized personnel who are dedicated to broker-dealer-wide data reporting. At the other end of the spectrum, large broker-dealers may be very complex, facilitating complex multi-leg transactions and operating within a non-centralized structure. These broker-dealers would be likely to experience CAT implementation costs far higher than broker-dealers with less complex structures for several reasons. First, some of these broker-dealers do not have a centralized IT infrastructure; instead, orders could originate from many locations in the broker-dealer and may be handled by diverse legacy systems, each of which the broker-dealer would need to adapt for CAT Data reporting.[898] Second, broker-dealers that accommodate more complex transactions that involve multiple asset classes would likely need to invest more time in understanding new regulatory requirements. In discussions with market participants, several broker-dealers noted, among other concerns, that determining the correct regulatory treatment for unusual trades can be a significant cost-driver in implementing regulatory rule changes and can delay implementation of system changes or precipitate a second round of changes once regulatory treatment of these trades is clarified. Third, broker-dealers that lack a centralized IT infrastructure would likely incur higher costs to comply with clock synchronization requirements because more servers may be handling orders than in firms with a more centralized IT infrastructure.

B. Re-Estimation

i. Count of Firms Likely To Rely Upon Service Bureaus for Data Reporting

To separately examine the costs to broker-dealers that outsource and to aggregate those costs across all broker-dealers, Commission Staff first established a count of CAT Reporters likely to outsource their regulatory data reporting functions. For this, the Commission analyzed data provided by FINRA.[899]

The FINRA data allows the Commission to examine how broker-dealers' current outsourcing activities vary with the number of ROEs reported to OATS. Figure 1 shows the percentage of OATS ROEs that are self-reported for five size categories of broker-dealers with the following OATS reporting activity levels for a four-week period from June 15–July 10, 2015: More than 1 billion records; 1 million to 1 billion records; 350,000 to 1 million records; 100,000 to 350,000 records; and 100,000 records or fewer.[900] The bars for each category represent the percentage of total OATS ROEs reported by broker-dealers in the category that were reported directly by the broker-dealers.

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[896] *See* Section IV.G.1.d, *infra,* for a discussion of the potential effects of the Plan on the market to report regulatory data.

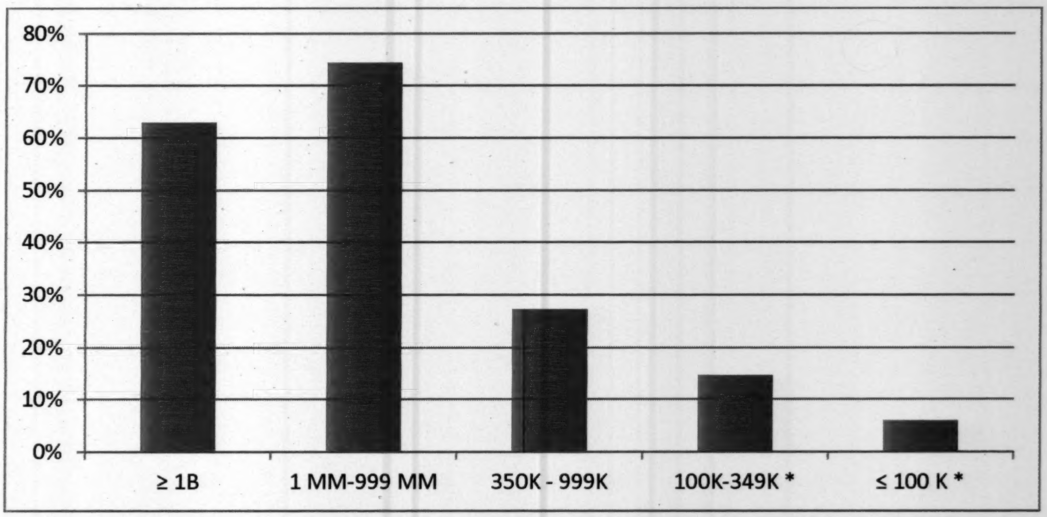
[897] These estimates are based on Staff discussions with service bureaus that were arranged by FIF. *See supra* note 895 and accompanying text. The $1 million per year figure contemplated a very large broker-dealer that provided its own order management system and market connectivity, so it likely represents a rough estimate of the regulatory data reporting costs of a very large firm. Because service bureaus did not provide an OATS activity level corresponding to "very large," the Commission relies on an analysis of FINRA data on OATS reporting to calibrate its definition of "very large" in terms of OATS activity level and seeks comment on what activity level should correspond to cost estimates for "very large" broker-dealers. The Commission notes that because there are relatively few broker-dealers that report at medium activity levels, the Commission's estimation of outsourcing costs is not particularly sensitive to this definition because most broker-dealers whose costs are estimated using the Outsourcing Cost Model have very low OATS reporting levels. Finally, estimates of total reporting costs include provision of an order-management system and market connectivity.

[898] In discussions with market participants, some broker-dealers indicated that they operate more than a dozen instances of a third-party's order handling system, suggesting they originate orders at more than a dozen places within the broker-dealer, yet they handle data reporting in-house. Firms such as these are likely to incur far higher costs to implement CAT compared to broker-dealers with a centralized IT infrastructure and fewer legacy systems because there are more systems that require changes to comply with new data reporting requirements.

[899] *See supra* note 893 and accompanying text.

[900] The group that reports one billion records or more comprises 77.90% of OATS records; the group that reports one million records to one billion comprises an additional 22.05% of OATS records. The remaining three groups comprise just 0.05% of all OATS records. Overall, firms self-report 65.44% of OATS ROEs.

Figure 1: Percentage of Self-Reported OATS ROEs by Broker-Dealer Activity Level



Based on this analysis of FINRA data, the Commission preliminarily believes that the 126 broker-dealers that reported more than 350,000 OATS ROEs between June 15 and July 10, 2015 make the insourcing-outsourcing decision strategically based on the broker-dealer's characteristics and preferences, while the remaining OATS reporters are likely to utilize a service bureau to accomplish their regulatory data reporting.[901] The categories of broker-dealers assumed to outsource their data reporting are marked with an asterisk (*) in Figure 1.

As seen in Figure 1, broker-dealers in the highest OATS-reporting category insourced reporting for more than 60% of the OATS ROEs reported. More specifically, the FINRA data shows that 16 broker-dealers reported more than a billion OATS ROEs each between June 15 and July 10, 2015; most of these broker-dealers (11) self-reported nearly all of their regulatory data, but 3 used service bureaus for 100% of their OATS reporting.

Figure 1 also shows that broker-dealers that report between 1 million and 1 billion OATS ROEs during the four-week period insourced reporting for more than 70% of the OATS ROEs they reported in aggregate. Thirty-six of these 89 broker-dealers used service bureaus to report at least 90% of their OATS data while 42 of these 89 broker-dealers self-reported over 99% of their regulatory data.

For the 21 broker-dealers that reported more than 350,000 but fewer than 1 million OATS ROEs during the sample period, Figure 1 shows that they insource approximately 27% of their aggregate OATS ROEs reporting. Thirteen of these broker-dealers use service bureaus for more than 99% of their OATS reporting while 7 of these 21 broker-dealers self-reported more than 98% of their OATS data.

For the 806 broker-dealers that reported fewer than 350,000 OATS ROEs during the sample period, approximately 88.9% of those OATS ROEs were reported through service bureaus, with 730 broker-dealers reporting more than 99% of their OATS ROEs through one or more service bureaus.[902] These broker-dealers are represented in the two right-most bars in Figure 1 that are identified with asterisks (*) in their labels. Because of the extensive use of service bureaus in these categories of broker-dealers, the Commission assumes that these broker-dealers are likely to use service bureaus to accomplish their CAT Data reporting.

ii. Estimation of Outsourcing Costs

The Commission has estimated ongoing costs for outsourcing firms using a model based on data gleaned from discussions with service bureaus and broker-dealers and implementation costs using information learned in conversations with industry.[903] Service bureaus that provide order-handling systems, market connectivity and regulatory data reporting services estimated that a very small broker-dealer was likely to currently spend $50,000–$180,000 per year for these services; they suggested that current annual costs for very large broker-dealers would likely be $1,000,000–$2,400,000 but could be greater in some cases.[904] The Commission assumes that a very small broker-dealer would report a single OATS ROE per month and a very large broker-dealer would report 100 million OATS ROEs per month.[905]

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[901] The Commission preliminarily believes this decision is strategic and discretionary because FINRA data reveals that while many broker-dealers at these activity levels self-report most or all of their regulatory data, other broker-dealers outsource most or all of their regulatory reporting at these activity levels. At lower activity levels, most, but not all, broker-dealers outsource most if not all of their regulatory data reporting. The Commission is cognizant that some broker-dealers reporting fewer than 350,000 OATS ROEs per month can and do opt to self-report their regulatory data. However, based on conversations with broker-dealers, the Commission preliminarily believes that most broker-dealers at these activity levels do not have the infrastructure and specialized staff that would be required to report directly to the Central Repository, and electing to self-report would be cost-prohibitive in most but not all cases. *See* Section IV.F.1.c(2)A, *supra*.

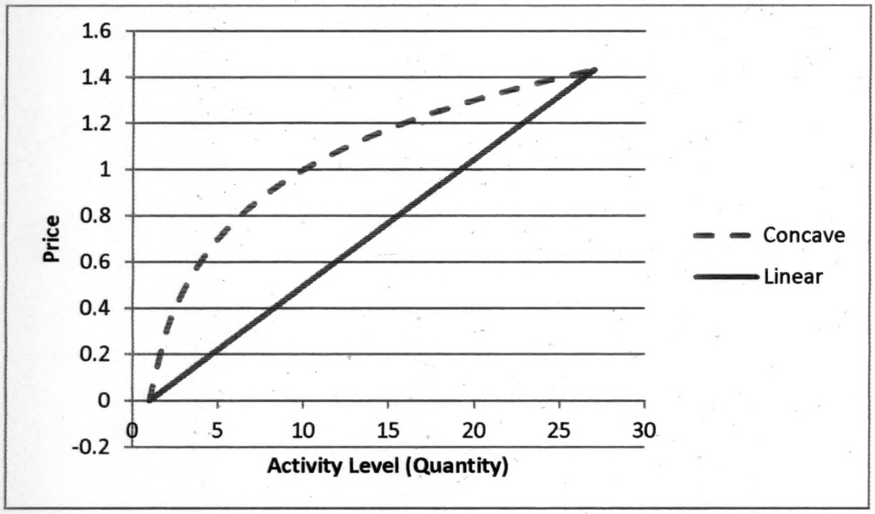
[902] Although most of these broker-dealers report nearly all of their ROEs through a service bureau, there are broker-dealers, both large and small, that self-report nearly all of their OATS data at all activity levels, including a broker-dealer that self-reported two OATS ROEs during the sample. Despite this variation, the Commission believes that its assumptions regarding which firms are likely to outsource and which firms have discretion are appropriate because (1) small firms that insource likely do so because it is less costly so the assumption simplifies the analysis and overestimates costs and (2) the cost information for the other firms already accounts for both insourcing and outsourcing.

[903] *See supra* note 880.

[904] Estimates are based on FIF-arranged conversations with service bureaus. *See supra* note 880.

[905] The Commission preliminarily believes that firms that report more than 350,000 OATS ROEs per

Figure 2: Example of Concave and Linear Pricing Functions



Based on discussions with market participants, the Commission assumes that the cost function for outsourcing is concave.[906] This type of function is appropriate when costs increase as activity level increases, but the cost per unit of activity (*e.g.*, cost per report) declines as activity increases. Volume discounts can create such cost functions. Alternatively, if the Commission estimates outsourcing costs as a linear function using the two point-estimates (very small firms and very large firms) obtained from service bureaus, that outsourcing cost model would underestimate the costs of broker-dealers that are neither very large nor very small due to the concavity of the function. As shown in Figure 2, a concave function is greater than the linear function that connects its endpoints. To illustrate the underestimation concern, if the estimated pricing function was a straight line but the actual pricing function was concave, the estimates would be too low. Lacking data on outsourcing costs faced by broker-dealers with activity levels that are neither very small nor very large, which would assist the Commission in estimating the degree of concavity of the pricing function, the Commission's estimation assumes that service bureau pricing functions are similar in concavity to equity exchange pricing functions.[907]

The Commission relies on a schedule of average charges to access liquidity and rebates to provide liquidity from four non-inverted exchanges to estimate the concavity of the exchange pricing function, which the Commission uses to approximate the concavity of the outsourcing cost model.[908] On such exchanges, the party receiving liquidity in the transaction generally pays a fixed fee to do so; the party providing liquidity receives a rebate from the exchange. This rebate often marginally increases with the market participant's aggregate volume on the exchange.[909] For liquidity providing firms, this pricing scheme would imply a concave function of the cost differential between taking and providing liquidity, which informs the Commission's estimation of the degree of concavity of the outsourcing cost model. The Commission preliminarily believes that estimating the shape of the function[910] using exchange pricing functions is a reasonable approach because the same

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month outsource on a discretionary basis. If the estimate of activity level for very large firms is too large (100 million ROEs is used in the model estimation), the Commission's model would underestimate the costs of all firms that report fewer than 350,000 OATS ROEs per month currently. The Commission preliminarily believes the 100 million ROEs per year size estimate to be reliable because although most firms at activity levels between 40 million and 300 million OATS ROEs (15 firms) self-report, several use service bureaus.

[906] The Commission preliminarily believes that service bureau pricing functions are concave based on discussions with service bureaus arranged by FIF. *See supra* note 897.

[907] The Commission relies on exchange pricing functions because the data is publicly available and because a broker-dealer's activity level on exchanges is correlated with the quantity of regulatory data it generates. If the pricing function for service bureau services is more concave than exchange pricing functions, the Commission's preliminary model would underestimate costs for broker-dealers that are neither very small nor very large because an increase in concavity would increase the distance between the concave and linear functions in Figure 2.

[908] On many exchanges, the party posting a resting order earns a rebate when his order is executed. His counterparty, whose order immediately executes, pays a fee to the exchange, which exceeds the rebate the liquidity-providing party earned. The difference between the rebate and the fee represents the cost a market participant would incur to fill a resting order on the exchange, then immediately trade out of the position—a so-called "round-trip" cost. The magnitude of this round-trip cost is often a function of the market participant's trading activity on the exchange, with more active traders paying lower round-trip costs. On "inverted" exchanges, the party with the resting order pays a fee while her counterparty that receives immediate execution earns a rebate. The Commission's estimate of concavity relies on data from exchanges that do not feature inverted pricing.

The Commission obtained public fee schedule data from Web sites for NASDAQ, PSX, NYSE, and ARCA during October, 2015. For NASDAQ, the differential between access fees and liquidity rebates was calculated using the universal "take fee," and rebates were for shares trading at greater than $1.00 per share (*http://www.nasdaqtrader.com/Trader.aspx?id=PriceListTrading2*. For PSX, calculations used the Tape C remove charge less rebate to add displayed liquidity (*http://www.nasdaqtrader.com/Trader.aspx?id=PSX_Pricing*). For NYSE, calculations used the "Providing Tier 3/2/1" rebates versus the universal "take fee" (NYSE Trading Fees). For ARCA, calculations used charges and rebates for midpoint passive liquidity orders *available at https://www.nyse.com/publicdocs/nyse/markets/nyse-arca/NYSE_Arca_Marketplace_Fees.pdf*.

[909] *See supra* note 908 for examples of exchange pricing schedules.

[910] This estimation affects the shape of the function, and thus the relative prices that are estimated for each broker-dealer; the absolute level of prices is determined through the function's calibration, which is described below.

activities that determine a broker-dealer's access fees on exchanges—such as executing orders and the activities such as order submission that are requisite to those executions—would affect the broker-dealer's impact on a service bureau's infrastructure and thus the fee that a service bureau is likely to charge to provide services to the broker-dealer.

The Commission's estimation of the outsourcing cost model begins with construction of a tiered function based on the exchange pricing function; the incorporation of the exchange pricing function is the source of the concavity in the model.[911] The Commission's estimation of exchange pricing assumes four activity level categories.[912] The Commission preliminarily mapped OATS reporting activity levels to exchange fee break points, with the assumptions that only a very small minority of firms would qualify for the lowest-fee tier of services and all of the firms that reported so few OATS ROEs to be assumed to be Outsourcers would be at the highest-cost tier of service.[913] Consequently, the Commission assumed the first fee break-point to be 350,000 OATS messages per month. A firm with 1 million messages per month is assumed to qualify for the third pricing tier. To qualify for the most favorable pricing tier, a firm would need to report more than 100 million OATS messages per month. The model is fitted by adding a constant to the implied cost of message traffic to bring firms with a single OATS ROE to the minimum $50,000 annual fee discussed by service bureaus. The fee for very large firms (for purposes of this model, 100 million plus records per month) is calibrated by multiplying the estimated exchange fee tiered function by a constant scale factor of 30. With these adjustments, the tiered function implies a firm with 20,000 OATS ROEs per month would incur a service bureau fee of $50,705 annually; a firm with 100 million OATS ROEs per month would incur a service bureau fee of $1.175 million annually; and a firm with 1 billion OATS ROEs per month firm would incur a service bureau fee of $11.3 million annually.[914]

The final step in estimating the Outsourcing Cost Model is to smooth the tiered function by fitting it to a polynomial. As discussed previously, tiered functions are not continuous; the behavior of the function can change dramatically at a discontinuity, such as happens when moving from one activity level category to another. In the earlier illustrative example, a vendor offered pricing that would be characterized by a tiered function, in which the firm charges $1 per unit for orders of 100 units or less, or $.80 per unit for orders up to 400 units. In this example, a purchase of 100 units is more expensive than a purchase of 120 units.[915] On exchanges, the pricing discontinuities may be acceptable to broker-dealers because the broker-dealers can more easily estimate a range of volume rather than actual volume, and thus pricing discontinuities may allow the broker-dealers to better forecast their expected exchange fees based on those volume ranges. For the Outsourcing Cost Model, however, such discontinuities are undesirable because service bureaus negotiate the contract with each customer individually and contracts generally cover a period of several years. Consequently, service providers provide custom quotations in consideration of the firm's business activities and likely capacity impact upon the provider's infrastructure. The Commission preliminarily believes that there are unlikely to be instances in which a service bureau's costs to service a customer would decrease if the customer were to become more active, and because the contract has a fixed cost, there is unlikely to be incentives to price with a tiered function to ease billing. To smooth the Outsourcing Cost Model, the Commission estimates a second degree polynomial to points imputed across the tiered function.[916] This step essentially involves finding a smooth curve that closely tracks the tiered function, but smoothes its discontinuities.

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[911] A tiered function often looks like a set of steps with points of discontinuity where the function appears to suddenly move up or down. Often, a tiered function's behavior is determined by the range of its independent variable (input value). For example, a firm that charges $1 per unit for orders of 100 units or less, or $.80 per unit for orders of more than 100 units prices according to a step function, with the number of units ordered being the independent variable. On exchanges, the round trip cost (access fee less rebate) is often a step function based on the firm's activity level during a given calendar period.

[912] The Commission chose four tiers to strike a balance between incorporating as much information from exchange pricing models and having to extrapolate information from them. NASDAQ and PSX have five activity level tiers, while NYSE and ARCA have three activity level tiers. Building a model with only three tiers would ignore potentially significant information from NASDAQ and PSX while building a model with five tiers would require extrapolating information on nonexistent tiers on NYSE and ARCA, which adds imprecision to the function. For NASDAQ and PSX, the Commission used prices for the four most active tiers in the analysis; for NYSE and ARCA, the Commission used all three, with the middle activity level assumed constant over the two middle activity tiers in the outsourcing cost model. The aggregate exchange price function averages prices on those four exchanges.

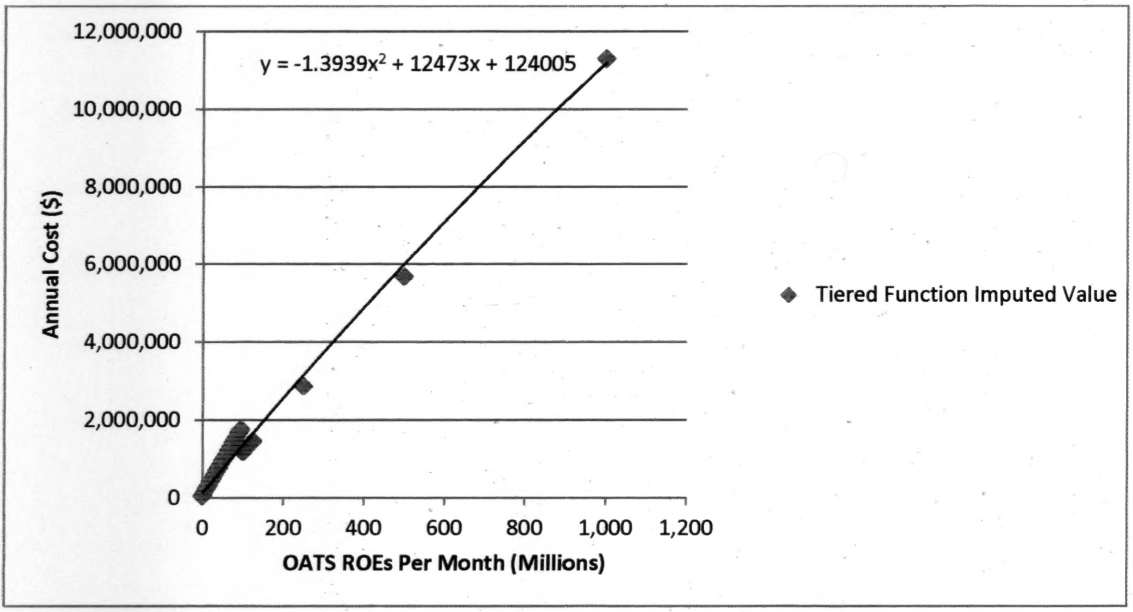
[913] The Commission preliminarily believes that this is a conservative assumption because all of the firms assumed to be outsourcing are assumed to be at the highest priced service level on a per record reported basis. This causes the Commission's estimate of their costs to be higher than other possible assumptions.

[914] Estimates are outputs of the calibrated step function based on exchange pricing. Calculations are as follows: Outsourcing Cost = Fixed Fee ($50,000) + Monthly OATS ROEs × Fee per ROE. $50,705 = $50,000 + 20,000 × $0.03525; $1.175 million = $50,000 + 100MM × $0.01125; $11.3MM = $50,000 + 1B × $0.01125.

[915] In this illustrative example, 100 units would cost $100 (100 units × $1 per unit), while 120 units would cost $96 (120 units × $.80).

[916] A first degree polynomial is linear; a second-degree polynomial includes a term raised to the power of two and defines a quadratic function. The Commission did not consider higher degree polynomials because they include inflection points, which would be undesirable in this model because there is unlikely to be a range in which costs per unit would be expected to increase with volume. Quadratic functions are characterized by curves with a single minimum or maximum and include concave curves that would be typical of cost curves with volume discounts. The estimated functional form of the outsourcing cost model used in cost estimates is based on OATS ROE activity levels expressed in millions of ROEs per month. The estimated function is: Cost estimate = $-1.3939\ \text{ROEs}^{2} + 12{,}473\ \text{ROEs} + 124{,}005$. Model fit statistics, used to measure how well a model fits its underlying data, are not meaningful for this model because points used for the estimation are imputed rather than observed. This function is not monotonic (always increasing or always decreasing); it has a maximum at 4.47 billion ROEs. The Commission believes this is not a serious concern because the model is not used to provide cost estimates for firms that report more than 350,000 OATS ROEs per month.

Figure 3: Model of Service Bureau Charges



The model's output in Figure 3 is an estimate of a broker-dealer's current cost to outsource data reporting services as part of a bundle of services from a service bureau; for smaller broker-dealers, it is assumed to include provision of an order management system and market connectivity.[917]

To estimate costs of CAT Data reporting by the service bureaus, the Commission preliminarily assumes that the current pricing function would apply for CAT Data reporting, but the costs in relation to the number of ROEs would increase because some events that are excluded from OATS (like proprietary orders originated by a trading desk in the ordinary course of a member's market making activities), would be included in CAT.[918] The Commission estimates the expected increase in broker-dealer data by estimating the ratio of all SRO audit trail data (OATS and exchange data) to OATS data; with this methodology, the Commission estimates CAT Data ROEs reported by broker-dealers would increase from those reported to OATS by a factor of 1.9431.[919] The Commission preliminarily believes that the assumption of the same cost function is reasonable for several reasons. First, the service bureaus that provide market access for broker-dealers already process the exchange traffic for most of these broker-dealers. Although the number of ROEs reported would increase, service bureaus already host most of the data that broker-dealers would report to the Central Repository. Second, although some broker-dealers would have to establish a process of hosting or processing their customer information at their service bureau, many broker-dealers already do so to allow their service bureau to prepare information for clearing.[920]

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[917] In conversations with Commission staff, service bureaus related that some very large clients provide their own order-handling system and market connectivity. *See supra* note 880.

[918] Although the pricing function is assumed constant, broker-dealer costs would increase because the number of ROEs they report through their service bureaus would increase under the Plan. It is possible that, if the Plan is approved, data under CAT might be reported in a form other than ROEs; however, if a ROE is equivalent to a Reportable Event, the number of Reportable Events—regardless of the form of the event report—would increase by approximately the same adjustment factor.

[919] To approximate the increase in reporting activity that broker-dealers would likely experience if the Plan were approved, the Commission relied on equity data from the week of September 15–19, 2014, previously provided by FINRA. This FINRA data includes all OATS data reported to FINRA, as well as SRO audit trail data from all equity exchanges effecting trades that week except the Chicago Stock Exchange. The adjustment factor was estimated by dividing the number of ROEs in SRO audit trail data hosted by FINRA for all exchanges and OATS, by the number of ROEs in OATS; this methodology is equivalent to assuming that all exchange message traffic would become reportable by broker-dealers. Because some exchange message traffic is already reported through OATS, this is a conservative assumption in the sense that it increases the adjustment factor and consequently increases estimates of broker-dealer reporting costs. To adjust for the missing exchange, data for the NASDAQ OMX BX (the lowest volume exchange with trading volume exceeding that of the Chicago Stock Exchange, based on trades reported through NYSE TAQ) was double-counted in the exchange activity total. Although this adjustment factor does not capture options data, the Commission preliminarily believes that the underestimation is not material in this application because the Plan assumes that Options Market Maker quotes (the most frequent option event) would not be reported by broker-dealers. Furthermore, the Commission notes that the largest group of events excluded by OATS but reportable under CAT's reporting rules (proprietary orders originated by a trading desk in the ordinary course of a member's market making activities) predominantly originate from insourcing firms for which the service-bureau model does not provide estimates of reporting costs. Consequently, the adjustment factor is likely to overestimate the increased regulatory data volume of outsourcing firms under CAT to a degree that should encompass the limited option activity reported by outsourcing broker-dealers.

[920] Broker-dealers that self-clear but rely on a service bureau to perform their regulatory data reporting may not have infrastructure in place to share customer information with their service providers. However, service bureaus that provide regulatory data reporting services would need customer information to perform CAT reporting. The Commission preliminarily believes that service bureaus that do not currently collect customer information but provide regulatory data reporting services would need to change their business processes to continue to offer regulatory data reporting services; the Commission further assumes that the cost estimates presented in the Vendors Study encompass the expenses these service bureaus would incur to continue providing their current service offerings. In discussions with service bureaus arranged by FIF, some service bureaus that do not offer clearing services discussed additional costs, some related to security, that accompany hosting customer information. If these

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Consequently, most service bureaus have already established the infrastructure to host or process customer information. Third, the Plan requires broker-dealers to update customer information files, one of the additional data sources that broker-dealers would need to report to the Central Repository. While the costs of ensuring the appropriate security could be significant, these updates occur at a much lower frequency than the rate of a service bureau customer's market activity, and thus such updating activity would be unlikely to provide a technological stress on a service bureau's infrastructure.

The Commission preliminarily believes this activity is unlikely to result in a service bureau pricing structure that significantly differs from the Commission's current outsourcing cost model. The Commission recognizes, however, that these new data sources create implementation costs for both broker-dealers and service bureaus, and preliminarily believes that these costs are reflected in cost estimates provided by service bureaus because service providers that responded to the Service Providers Study were presumably familiar with the requirements of CAT when they estimated the costs they could likely incur if the CAT NMS Plan is approved. The number of ROEs broker-dealers would report would likely increase because, for example, proprietary orders originated by a trading desk in the ordinary course of a member's market-making activities, currently excluded from OATS, would be included in a broker-dealer's audit trail data under the Plan.[921] The increase in ROEs would drive an increase in service bureau costs that the Commission's model anticipates for broker-dealers that would outsource CAT Data reporting obligations.[922] For illustration, consider two firms: Firm A reports the median number of OATS ROEs per month in the Outsourcers sample (1,251) and Firm B reports the maximum number of OATS ROEs per month (348,636). After CAT implementation, the estimation would assume that Firm A would report 2,431 ROEs of audit trail data per month and Firm B would report 677,435 ROEs of audit trail data per month.[923] Using the outsourcing cost model discussed above, Firm A's annual cost would increase from $124,021 to $124,035. Firm B's average annual cost would increase from $128,353 to $132,454.[924]

Application of the model to data provided by FINRA allows the Commission to estimate current outsourcing costs for broker-dealers, as well as projected costs under the CAT NMS Plan.[925] The Commission estimates that the 806 broker-dealers that monthly each currently report fewer than 350,000 OATS ROEs currently spend an aggregate $100.1 million on annual outsourcing costs.[926] Under the CAT NMS Plan, the Commission estimates these 806 broker-dealers would spend $100.2 million on annual outsourcing costs. The Commission recognizes that the magnitude of this increase is quite small, but this is driven by the fact that the vast majority of firms that are assumed to outsource have very low regulatory data reporting levels currently. As mentioned previously, the median firm in this group reports 1,251 OATS ROEs per month; only 39 of these 806 firms currently reports more than 100,000 OATS ROEs per month. The Outsourcing Cost Model also does not include additional staffing costs that the broker-dealer is likely to incur for implementation and maintenance of CAT reporting; these are discussed further below, and are the primary cost driver of costs that Outsourcers are expected to incur if the Plan is approved. Furthermore, the Commission is cognizant that data reporting is

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service bureaus were to stop offering regulatory data reporting services due to unwillingness to host customer information, their customers would be forced to establish new service bureau relationships or undertake self-reporting. The Commission cannot rule out that one or more service bureaus may choose to exit the market to provide data reporting services rather than change their business practices to satisfy their clients' responsibilities under the Plan. Any such event would potentially be very costly to the broker-dealer clients of the exiting service bureaus due to the switching costs that broker-dealers incur to change service bureaus. Such an event could also contribute to crowded entrances problems. *See infra* note 934. The Commission preliminarily believes that such service bureau exit events are unlikely because service bureaus should be able to pass costs associated with handling customer information on to their clients as part of a more comprehensive bundle of services. Furthermore, based on information from broker-dealer discussions arranged by FIF, the Commission preliminarily believes that the market for regulatory data reporting services is generally expanding and the trend is for more, not less, outsourcing. Consequently, the Commission believes that market share in this market is valuable and existing competitors are unlikely to voluntarily exit the market abruptly. The Commission preliminarily believes that most firms that report fewer than 350,000 OATS ROEs per month do not self-clear; smaller firms that do not self-clear are likely to already have relationships with service bureaus that host their customer information. It is possible that some of these firms have clearing arrangements that do not include regulatory data reporting; these firms may be forced to seek new service bureau relationships to satisfy their CAT reporting obligations, but it is also possible these clearing firms may either add CAT reporting as a service or establish a relationship with a service bureau to perform the function of providing customer information for CAT on behalf of its clients.

[921] The Commission recognizes that OATS does not include options market activity. Because option quotes are not reportable by broker-dealers under the Plan, the Commission preliminarily believes that option related events would not significantly increase the number of events that would be included in regulatory data reporting for broker-dealers whose costs are estimated by the Outsourcing Cost Model. The Outsourcing Cost Model predicts costs only for broker-dealers that the Commission expects to outsource CAT reporting responsibilities. Because exchanges would report Options Market Maker quotes, the Outsourcing Cost Model would not predict the costs of reporting Options Market Maker quotes. *See* Exemption Order, *supra* note 18, at 11857–58.

In addition, the Commission recognizes that larger and more complex broker-dealers are likely to have significant regulatory reporting responsibilities related to their options activities, but the Commission preliminarily believes that these broker-dealers are likely to be included in the broker-dealers reporting more than 350,000 OATS ROEs per month. The Commission estimates these broker-dealers' costs using information from the Reporters Study in the Plan as opposed to the Outsourcing Cost Model, and those cost estimates presumably include costs related to options activity.

[922] The Outsourcing Cost Model assumes that other CAT reporting tasks like providing customer information to the Central Repository are handled by the firms' service bureaus. In practice, some Outsourcers may have a service bureau that provides an order handling system and market connectivity, but does not currently host broker-dealers' customer information, while another service provider provides clearing services and hosts customer information. For broker-dealers with multiple service provider relationships, the clearing broker-dealer is assumed to provide services that include providing the Central Repository with the customer information for its broker-dealer clients. The Commission recognizes that not all clearing firms may plan to provide this service to their customers, and this may result in additional costs for broker-dealers that do not have relationships with service providers that will provide all services they need to comply with CAT, if it is approved. This is discussed further below in Section IV.G.1.d, *infra*.

[923] Firm A: $2{,}431 = 1{,}251 \times 1.9431$. Firm B: $677{,}435 = 348{,}636 \times 1.9431$.

[924] Firm A: $\$124{,}021 = -1.3939 \times (0.001251)^2 + 12{,}473 \times 0.001251 + 124005$; $\$124{,}035 = -1.3939 \times (0.002431)^2 + 12{,}473 \times 0.002431 + 124{,}005$. Firm B: $\$128{,}353 = -1.3939 \times (0.348636)^2 + 12{,}473 \times 0.348636 + 124{,}005$; $\$132{,}454 = -1.3939 \times (0.677435)^2 + 12{,}473 \times 0.677435 + 124{,}005$. The Commission notes that, as set forth, the outsourcing cost model's output is dominated by the fixed cost of maintaining service at low reporting levels. But if the service bureau cost model estimated a very large firm's outsourcing cost, a very large firm's cost increase due to CAT would be far more significant. For example, a firm that reported 1.05 billion OATS ROEs per month would have estimated current costs of $11.7 million annually; after CAT implementation, its costs would be estimated to be $19.8 million. However, the Commission does not assume that firms that report more than 350,000 OATS ROEs per month are Outsourcers nor does the Commission assume that they are necessarily Insourcers; instead, their costs are estimated using data from the Reporters Study.

[925] This data is described above. *See supra* note 893.

[926] The average broker-dealer in this category reported 15,185 OATS ROEs from June 15–July 10, 2015; the median broker-dealer reported 1,251 OATS ROEs. Of these broker-dealers, 39 reported more than 100,000 OATS ROEs during the sample period.

normally part of a bundle of services provided by a service bureau; many of those services, including the provision of market access and an order handling system, are likely to contribute substantially to the costs service bureaus bear to service their clients. The Commission is cognizant that while the volume of transactions reported by broker-dealers assumed to be Outsourcers are unlikely to dramatically increase under CAT, the service bureaus would incur significant costs to implement changes required by CAT reporting. Those costs are discussed below.[927] Assuming service bureaus pass those implementation costs on to their broker-dealer clients eventually, the Outsourcing Cost Model would change.[928]

Firms that outsource their regulatory data reporting still incur internal staffing costs associated with this activity. These employees perform activities directly related to regulatory data reporting such as answering inquiries from their service bureaus, investigating reporting exceptions, maintaining any systems that transmit data to their service providers, and overseeing their service bureaus' data reporting to ensure compliance.[929] Based on conversations with market participants, the Commission estimates that these firms currently have 0.5 full-time employees devoted to regulatory data reporting activities. The Commission further estimates these firms would need one full-time employee for one year to implement CAT reporting requirements, and 0.75 full-time employees on an ongoing basis to maintain CAT reporting.[930]

In addition to broker-dealers that currently report to OATS, the Commission estimates there are 799 broker-dealers that are currently excluded from OATS reporting rules due to firm size, or exempt because all of their order flow is routed to a single OATS reporter, such as a clearing broker, that would have CAT reporting responsibilities.[931] The Commission assumes these broker-dealers would have low levels of CAT reporting, similar to those of the typical Outsourcers that currently report to OATS.[932] For these firms, the Commission assumes that under CAT they would incur the average estimated outsourcing cost of firms that currently report fewer than 350,000 OATS ROEs per month, which is $124,373 annually. Furthermore, because these firms have more limited data reporting requirements than other firms, the Commission assumes these firms currently have only 0.1 full-time employees currently dedicated to regulatory data reporting activities. The Commission assumes that these firms would require 2 full-time employees for one year to implement the CAT NMS Plan and 0.75 full-time employees annually to maintain CAT Data reporting.[933]

The Commission recognizes that some broker-dealers that are categorized in its estimation as Outsourcers in fact currently self-report their regulatory data; there are 36 firms that the Commission categorized as Outsourcers that self-report more than 95% of their OATS ROEs. Some of these broker-dealers could find that the costs associated with adapting their systems to the CAT NMS Plan reporting would render self-reporting (insourcing) CAT Data reporting infeasible or undesirable; others could continue to self-report regulatory data. The Commission preliminarily believes that the estimated cost of outsourcing for these broker-dealers is reliable, but recognizes that some of these broker-dealers could choose to self-report for other reasons at costs that could exceed these estimates. If some of these broker-dealers choose to outsource under CAT, these broker-dealers would likely incur additional costs associated with establishing or re-negotiating service bureau relationships.[934] The Commission does

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[927] *See* Section IV.F.1.d, *infra.*

[928] This would constitute a transfer of costs between market participants, but would not affect the Commission's estimate of the total costs to industry. In particular, the Commission preliminarily believes that if service bureaus pass their implementation costs on to their broker-dealer clients, it would appear as higher ongoing costs for those clients, but the overall costs would not change.

[929] Other employees perform other compliance duties such as supervising associated persons, and creating and enforcing internal regulatory policies (*e.g.,* personal trading, churning reviews, sales practice reviews, SEC filings and net capital compliance). Because these regulatory activities are not part of regulatory data reporting directly affected by the Plan, they are not included in activities that contribute to current regulatory data reporting costs in the Commission's analysis.

[930] As previously discussed, the Commission preliminarily believes that small broker-dealer cost data in the Reporters Study is unreliable. Based on discussions with broker-dealers, the Commission preliminarily believes that very small broker-dealers are unlikely to have employees entirely dedicated to regulatory data reporting. Instead, other employees have duties that include dealing with service bureau matters and answering regulatory inquiries. The Commission assumes a full-time employee costs $424,350 per year. *See* Section V.D.2(2)A.i, *infra.*

[931] In discussions with Commission Staff, FINRA has stated that there are currently 54 OATS-exempt broker-dealers and 691 OATS-excluded firms. The Commission's estimate of 799 new CAT-reporting broker-dealers is based on the counts of other broker-dealer types (current OATS reporters, ELPs, Options Market Makers, and floor brokers) and the 1,800 broker-dealer estimate provided in the Plan. Based on the FINRA information on OATS-excluded or OATS-exempt broker-dealers, there are 54 remaining broker-dealers in the 1,800 with an unknown type. The Commission preliminarily assumes that these broker-dealers are small and new reporters, although it is possible that they are floor brokers on exchanges other than the CBOE (CBOE floor brokers are accounted for directly as discussed below.) Floor brokers are assumed to have the same costs as new reporting small firms, so there would be no impact on the Commission's cost estimate if these firms were reclassified as options floor brokers.

[932] Exemption or exclusion from OATS may be based on firm size or type of activity. Broker-dealers with exemptions or exclusions that relate to firm size are presumably relatively inactive. However, some firms may be exempted or excluded because they route only to a single OATS-reporting broker-dealer; this could encompass large firms that would be more similar to Insourcers.

[933] The Commission assumes that these very small firms already have established service bureau relationships to provide an order handling system, market access, and clearing services. If any of these firms would have to establish these relationships to comply with CAT, they would likely face greater costs associated with implementing these relationships. Furthermore, the Commission notes that conversations with market participants revealed that establishing these relationships can be difficult for very small firms because their relatively low activity levels results in service bureau fees that may not make the relationship economically feasible for service providers. Faced with this constraint, some very small firms currently resort to establishing "piggy back" relationships with larger broker-dealers, essentially using another firm as its introducing broker. Such a relationship may add an additional layer of costs to those discussed here, but such an agreement may actually prove less costly for these small firms than establishing the service bureau relationships assumed in the cost estimation because the process of onboarding with a service bureau is costly.

[934] In addition to the 36 broker-dealers discussed above, it is possible that many of the 799 broker-dealers that are currently exempt or excluded from OATS reporting may seek to establish service bureau relationships to accomplish their regulatory reporting required under the Plan if it were approved. It is possible that this could precipitate a "crowded entrances" problem in the market for regulatory data reporting services, in which more broker-dealers wished to establish relationships than the market could accommodate. As discussed previously, the onboarding process for service bureaus is onerous and time-consuming, both for the broker-dealer and the service bureau. If a large number of broker-dealers seek relationships simultaneously, service bureaus might not accommodate them in time to meet CAT reporting requirements. In such a situation, smaller broker-dealers are more likely to fail to establish service bureau relationships because they are presumably less profitable for service bureaus to serve and so are likely to be seen as lower-priority when onboarding resources are constrained. Some small broker-dealers could be forced to establish relationships with larger broker-dealers and rely on their infrastructure, essentially using the larger partner as an introducing broker. This could add an additional layer of costs for the smaller broker-dealer. The Commission preliminarily believes that significant crowded entrances problems with service bureaus are unlikely for two reasons. First, in discussions with service bureaus arranged by FIF, several service bureaus stated that onboarding resources were not difficult to scale up. Consequently, it seems likely that service bureaus could deploy additional onboarding resources to accommodate new demand for their services.

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not have information on existing service bureau relationships for firms that currently self-report OATS data, so cannot estimate the costs these firms might face in aggregate. It would be, however, unlikely that many firms of this size do not have relationships with service bureaus that would provide this service because firms with limited OATS reporting are unlikely to be large enough to self-clear and support the IT infrastructure necessary to provide a proprietary order handling system and market access.

C. Aggregate Broker-Dealer Cost Estimate

The Commission's methodology to estimate costs to broker-dealers of implementing and maintaining CAT reporting varies by the type of broker-dealer. As discussed previously,[935] the Commission preliminarily believes that the survey of small broker-dealers used in the Reporters Study is unreliable. The Commission does, however, rely on the Reporters Study's large broker-dealer cost estimates in estimating costs for Insourcers. Consequently, for broker-dealers that are FINRA members, the Commission relies on the Reporters Study data to estimate costs for broker-dealers that report more than 350,000 OATS ROEs per month (using estimates from the Reporters Study for large, OATS-reporting broker-dealers).[936] For lower activity FINRA-member broker-dealers (including those that do not currently report to OATS due to exclusions and exemptions to OATS reporting requirements), the Commission relies on the Outsourcing Cost Model to estimate costs for CAT Data reporting.

The Commission, however, preliminarily believes that there are three other categories of broker-dealers not reflected in the above detailed cost estimates that do not currently report OATS data but could be CAT Reporters. First, there are at least 14 ELPs that do not carry customer accounts; these firms are not FINRA members and thus have no regular OATS reporting obligations.[937] The Commission preliminarily believes that it is likely that these broker-dealers already have self-reporting capabilities in place because each is a member of an SRO that requires the ability to report OATS on request. The second group of broker-dealers that are not encompassed by the cost estimates of FINRA member broker-dealers discussed above are those that make markets in options and not equities. Although not required by the CAT NMS Plan to report their option quoting activity to the Central Repository,[938] these broker-dealers may have customer orders and other activity that would cause them to incur a CAT Data reporting obligation. Based on CBOE membership data, the Commission believes there are 31 options market-making firms that are members of multiple SROs but not FINRA.[939] The third group comprises 24 broker-dealers that have SRO memberships only with CBOE; the Commission believes this group is comprised primarily of CBOE floor brokers and, further, preliminarily believes these firms would incur CAT implementation and ongoing reporting costs similar in magnitude to small equity broker-dealers that currently have no OATS reporting responsibilities because they would face similar tasks to implement and maintain CAT reporting. The Commission assumes the 31 options market-making firms and 14 ELPs would be typical of the Reporters Study's large, non-OATS reporting firms because this group encompasses large broker-dealers that are not FINRA members, a category that would exclude any broker-dealer that carries customer accounts and trades in equities. For these 45 firms, the Commission relies on cost estimates from the Reporters Study.[940]

The estimated costs in the Reporters Study for non-OATS reporting firms are lower than the Reporters Study's estimated costs for large OATS-reporting firms; in reviewing the Reporters Study data, the Commission considered the possibility that firms that do not currently report OATS may systematically underestimate the costs they would incur to initiate and maintain the type of comprehensive regulatory data reporting that OATS entails or the CAT NMS Plan would entail. After discussions with multiple broker-dealers, the Commission, however, preliminarily believes that large non-OATS reporting firms would likely have lower CAT Data reporting costs than current OATS reporting large

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Second, the Commission preliminarily believes that most of the OATS exempt or excluded broker-dealers already have service bureau relationships which provide them with order handling systems and market access; it is likely that these service bureaus could add regulatory data reporting packages to their current bundle of services. Finally, the implementation timelines may help alleviate strained capacity because it would allow some time for expanding onboarding capacity and new entrants and would spread out onboarding somewhat. *See* Section IV.G.1.d, *infra.*

[935] *See* Section IV.F.1.c(1), *supra.*

[936] The Commission's cost estimates assume that broker-dealers that currently reporter fewer than 350,000 OATS ROEs per month are likely to use one or more service bureaus to report their regulatory data. This is discussed further in Section IV.F.1.c(2)B.i, *supra.*

[937] The category of Insourcers that do not currently report OATS data includes firms that have multiple SRO memberships that exclude FINRA. This category includes Options Market Makers and at least 14 ELPs; these are firms that carry no customer accounts and directly route proprietary orders to Alternative Trading Systems; further information on these firms including the methodology by which they are identified can be found in the 15b9–1 Proposing Release. *See* Proposed Amendments to Rule 15b9–1, *supra* note 498, at 18052. Because the Commission has identified at least 14 ELPs, it can consider these firms separately from Options Market Makers for analysis. However, the Commission recognizes that some firms that are classified as Options Market Makers may actually be ELPs, if they were not identified as ELPs previously and are members of CBOE; because the same cost estimates are used for these groups, this misclassification does not affect the Commission's aggregate cost estimates for broker-dealers. The Commission recognizes that some FINRA member firms also make markets in options; if these firms report more than 350,000 OATS ROEs per month, the Commission's estimate of these firms' costs would be based on the estimates for OATS-reporting large firms based on data in the Reporters Study, which are higher than estimates for non-OATS reporting large firms (which include Options Market Makers that do not currently report OATS). If FINRA member Options Market Makers report fewer than 350,000 OATS ROEs per month or are exempt or excluded from reporting, they would be incorrectly classified as Outsourcers. Furthermore, ELPs that were not included in the analysis for the 15b9–1 Proposing Release and are not CBOE members would be incorrectly classified as new Outsourcers.

Most if not all ELPs have SRO memberships that require them to report OATS data upon request. Consequently, these firms are likely to have infrastructure in place that would reduce their implementation costs for CAT. The Commission preliminarily believes that this is reflected in the lower CAT implementation costs that the Plan estimates for large firms that do not currently report OATS; these estimates form the basis of the Commission's estimates of costs that ELPs would face if CAT were approved.

[938] *See* Section III.B.9, *supra; see also* Exemption Order, *supra* note 18, at 11857–58.

[939] The Commission identified 39 CBOE-member broker-dealers that are not FINRA members, but are members of multiple SROs; 8 of these broker-dealers were previously identified as ELPs, leaving 31 firms with multiple SRO memberships that are unlikely to be CBOE floor brokers. These 31 firms are likely to include some ELPs. This methodology implicitly assumes that there are no Options Market Makers that are not members of the CBOE. Because the Commission uses the same cost estimates for ELPs and options market making firms, uncertainty in the classification of the 31 Non-FINRA member CBOE member firms does not impact the Commission's cost estimates. The Commission recognizes that Options Market Makers may be FINRA members, but preliminarily believes these broker-dealers would be identified as Insourcers using FINRA data discussed in Section IV.F.1.c(2)B.i and thus would not fall under cost estimates produced by the Outsourcing Cost Model.

[940] The Commission recognizes that additional broker-dealers may be members of neither FINRA nor CBOE, yet may incur CAT reporting obligations if the Plan is approved. Indeed, the Plan estimates that 100 CAT Reporters are not currently FINRA members (B.7.(b)(ii)(B)(2)), while the Commission estimates 69 (24 floor brokers, 31 Options Market Makers, and 14 ELPs). The Commission has determined that categorizing additional broker-dealers that are currently classified as exempt or excluded FINRA members as non-FINRA members would not change the cost estimates because these groups have identical estimated per-firm costs.

firms because large non-OATS reporting firms tend to be cutting-edge technology firms that already have a centralized IT infrastructure; they are unlikely to have a fragmented structure with multiple legacy systems. A centralized IT infrastructure with cutting-edge technology would likely simplify their implementation of the CAT NMS Plan, as fewer of their systems would need altering and fewer servers would be subject to clock synchronization requirements.

The Commission presents cost estimates for individual broker-dealers in Table 7 that include estimates of current costs, CAT implementation costs, and ongoing CAT reporting costs. In addition, Table 7 presents cost estimates for three categories of costs: Hardware/software; staffing; and outsourcing.[941] Table 7 also presents a total across these three categories.[942] Current data reporting cost estimates range from $167,000 annually for floor broker and firms that are currently exempt from OATS reporting requirements to $8.7 million annually for firms that currently report more than 350,000 OATS ROEs per month ("Insourcers"). One-time implementation costs range from $424,000 for current OATS reporters that are assumed to outsource ("OATS Outsourcers") to $7.2 million for Insourcers. Ongoing annual costs range from $443,000 annually for firms that are assumed to outsource (OATS Outsourcers, New Outsourcers and Floor Brokers) to $4.8 million for Insourcers.

TABLE 7—COST ESTIMATES FOR INDIVIDUAL BROKER-DEALERS BY TYPE

Broker-dealer type	Costs			
	Hardware/ software	Staffing	Outsourcing	Total
Current Costs:				
Insourcers	$720,000	$7,587,000	$400,000	$8,707,000
ELPs	3,000	1,409,000	22,000	1,433,000
Options Market Makers	3,000	1,409,000	22,000	1,433,000
OATS Outsourcers [1]	0	212,000	124,000	336,000
New Outsourcers [1]	0	42,000	124,000	167,000
Floor Brokers [1]	0	42,000	124,000	167,000
CAT Implementation:				
Insourcers	750,000	6,331,000	150,000	7,231,000
ELPs	450,000	3,416,000	10,000	3,876,000
Options Market Makers	450,000	3,416,000	10,000	3,876,000
OATS Outsourcers [1]	0	424,000	0	424,000
New Outsourcers [1]	0	849,000	0	849,000
Floor Brokers [1]	0	849,000	0	849,000
CAT Ongoing:				
Insourcers	380,000	4,256,000	120,000	4,756,000
ELPs	80,000	3,144,000	1,000	3,226,000
Options Market Makers	80,000	3,144,000	1,000	3,226,000
OATS Outsourcers [1]	0	318,000	124,000	443,000
New Outsourcers [1]	0	318,000	124,000	443,000
Floor Brokers [1]	0	318,000	124,000	443,000

[1] Outsourcing costs are modelled on an individual broker-dealer basis. Category averages are presented here.

Table 8 presents aggregate total costs to broker-dealers by broker-dealer type. The Commission estimates that broker-dealers spend approximately $1.6 billion annually on current regulatory data reporting activities. The Commission estimates approximate one-time implementation costs of $2.1 billion, and annual ongoing costs of CAT reporting of $1.5 billion. The Commission notes that estimates of ongoing CAT reporting costs of $1.5 billion are slightly lower than current data reporting costs of $1.6 billion. This differential is driven by reductions in data reporting costs reported by large OATS-reporting broker-dealers in the Reporters Study survey.[943] The Commission estimates that all other categories of broker-dealers would face significant increases in annual data reporting costs.

TABLE 8—AGGREGATE BROKER-DEALER COST ESTIMATES

Broker-dealer type	Costs			Count	Individual total	Aggregate total
	Hardware/ software	Staffing	Outsourcing			
Current Data Reporting Costs:						
Insourcers	$720,000	$7,587,000	$400,000	126	$8,707,000	$1,097,130,000
ELPs	3,000	1,409,000	22,000	14	1,433,000	20,068,000
Options Market Makers	3,000	1,409,000	22,000	31	1,433,000	44,437,000
OATS Outsourcers [1]	0	212,000	124,000	806	336,000	271,113,000
New Outsourcers [1]	0	42,000	124,000	799	167,000	133,137,000

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[941] The Commission preliminarily believes that "Hardware/Software" costs include technology such as servers and telecommunications infrastructure necessary to report data to the Central Repository, as well as software that must be acquired or costs to alter existing software. "Staffing" includes the costs of employees assigned to regulatory data reporting, and includes existing staff as well as staff that would need to be hired if the CAT NMS Plan is approved. "Outsourcing" includes costs of service bureau relationships, legal and technical consulting, as well as other services that firms would need to acquire from service vendors to accomplish CAT reporting.

[942] Rounding may cause totals to vary from the sum of individual elements in Table 7.

[943] In the Reporters Study, Large OATS Reporters cite average current data reporting costs of $8.32 million and Approach 1 maintenance costs of $4.5 million annually.

TABLE 8—AGGREGATE BROKER-DEALER COST ESTIMATES—Continued

Broker-dealer type	Costs			Count	Individual total	Aggregate total
	Hardware/ software	Staffing	Outsourcing			
Floor Brokers [1]	0	42,000	124,000	24	167,000	3,999,000
Total				1,800		1,569,884,000
CAT Implementation Costs:						
Insourcers	750,000	6,331,000	150,000	126	7,231,000	911,144,000
ELPs	450,000	3,416,000	10,000	14	3,876,000	54,257,000
Options Market Makers	450,000	3,416,000	10,000	31	3,876,000	120,141,000
OATS Outsourcers [1]	0	424,000	0	806	424,000	342,026,000
New Outsourcers [1]	0	849,000	0	799	849,000	678,111,000
Floor Brokers [1]	0	849,000	0	24	849,000	20,369,000
Total						2,126,048,000
CAT Ongoing Costs:						
Insourcers	380,000	4,256,000	120,000	126	4,756,000	599,285,000
ELPs	80,000	3,144,000	1,000	14	3,226,000	45,160,000
Options Market Makers	80,000	3,144,000	1,000	31	3,226,000	99,998,000
OATS Outsourcers [1]	0	318,000	124,000	806	443,000	356,764,000
New Outsourcers [1]	0	318,000	124,000	799	443,000	353,666,000
Floor Brokers [1]	0	318,000	124,000	24	443,000	10,623,000
Total						1,465,496,000

[1] Outsourcing costs are modeled on an individual broker-dealer basis. Category averages are presented here.

d. Costs to Service Bureaus

The Plan discusses costs that service bureaus would face to implement the CAT NMS Plan and maintain ongoing CAT reporting.[944] The CAT NMS Plan's cost estimates for service bureaus are based on the Participant's Costs to Vendors Study ("Vendors Study"), which gathered data from third-party vendors.[945] The Vendors Study requested information from thirteen (13) service providers about their potential costs for reporting CAT Data—five (5) service providers responded. The CAT NMS Plan cites aggregate implementation costs of $51.6 million to $118.2 million for service bureaus, depending on whether Approach 1 or Approach 2 is selected, where Approach 1 would be more costly to vendors.[946] Aggregate ongoing annual cost estimates ranged from $38.6 million to $48.7 million.

The Commission preliminarily believes that costs that service bureaus would face to implement CAT should be included as part of the aggregate costs of CAT. While the CAT NMS Plan does not require the use of service bureaus to report CAT Data, the Commission recognizes that the most cost effective manner to implement the CAT NMS Plan likely would be for most market participants to continue their current practice of outsourcing their regulatory data reporting to one or more service bureaus. By doing so, the roughly 1,600 broker-dealers predicted to outsource would avoid incurring a significant fraction of CAT implementation costs; instead, service bureaus would incur implementation costs on their behalf. Based on conversations with market participants, the Commission preliminarily believes that these implementation costs are likely to pass-through to broker-dealers that outsource data reporting, because service contracts between broker-dealers and service bureaus are renegotiated periodically, and approval of the CAT NMS Plan might trigger renegotiation as the bundle of services provided would materially change. Consequently, service bureaus likely would renegotiate their client agreements during the period of implementation of the CAT NMS Plan. The Commission preliminarily recognizes that service bureaus may, when re-negotiating these service contracts factor in the CAT implementation costs the service bureaus incurred; consequently, broker-dealers could see increases in costs that reflect a service bureau's efforts to recoup those costs. In its analysis of costs, the Commission includes these service bureau costs and separately identifies them as service bureau implementation costs, but the Commission recognizes that they are likely to ultimately be borne by broker-dealers.[947]

The Commission, however, preliminarily believes that the ongoing costs of CAT Data reporting by service bureaus would be duplicative of costs incurred by broker-dealers. The aggregate fees paid by outsourcing broker-dealers to service bureaus cover the service bureaus' costs of ongoing data reporting. To include ongoing service bureau costs as a cost of CAT would double-count the costs that broker-dealers incur for CAT Data reporting; thus, in aggregating the cost estimates for CAT, the Commission includes only the maximum implementation cost that vendors would likely face of $118.2 million.

2. Aggregate Costs to Industry

The Sections above provide four sets of cost estimates that together encompass the costs of the Plan. This Section discusses aggregation of these costs into the total costs of the Plan. The Plan provides estimates of the total costs to industry if the Commission approves the Plan. The Plan estimates initial aggregate costs to industry of $3.2 billion to $3.6 billion and annual ongoing costs of $2.8 billion to $3.4

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[944] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(D), Appendix C, Section B.7(b)(iv)(A)(4).

[945] *See id.* at Appendix C, Section B.7(b)(i)(A)(3); Appendix C, Section B.7(b)(iii)(D). The Commission preliminarily believes that most if not all market participants that responded to the Vendors Survey are service bureaus, but it is possible that some respondents are firms providing technology rather than service bureau services.

[946] Approach 1 allows broker-dealers to submit data to the Central Repository using their choice of existing industry messaging protocols while Approach 2 would specify a pre-defined format. *See* Section IV.E.1.b(3), *supra*.

[947] Although the Commission preliminarily believes that service bureau implementation costs would ultimately be passed on to broker-dealers, the Commission believes these costs are not double-counted in this analysis because re-negotiation of service bureau's contracts with their clients is not explicitly factored in to the Outsourcing Cost Model. Instead, the Commission recognizes these costs as being borne by the service bureaus initially, and does not identify a specific mechanism by which they will ultimately be passed onto broker-dealers.

billion, with system retirement costs of $2.6 billion.[948] The Commission estimates that industry would spend $2.4 billion to implement CAT, and $1.7 billion per year in ongoing annual costs.

Using estimates discussed above, the Commission recalculated total implementation and ongoing annual costs, partitioned across market participant types as possible. Because the Plan does not discuss how Central Repository costs would be partitioned across Participants and CAT Reporters, the analysis here presents Central Repository costs separately from costs to Participants and costs to CAT Reporters. The Plan presents some costs related to constructing and operating the Central Repository as ranges; in these cases, the Commission uses range maximums in the total cost calculation. Where costs differ for Approach 1 and Approach 2, the Commission uses estimates for the approach that is more costly in aggregate.[949]

Table 9 presents estimates of aggregate current, implementation, and ongoing costs to the industry. The Commission notes that costs to broker-dealers are much greater than the costs of building and maintaining the Central Repository. In terms of magnitudes of aggregate costs, costs to the 126 largest broker-dealers that currently report OATS data is the largest driver of implementation costs, accounting for 38.3% of CAT implementation costs. Although these firms would face significant costs in implementing CAT, the Reporters Study survey results suggest that they anticipate lower ongoing reporting costs than they currently incur ($599 million annually in expected aggregate costs versus $1.1 billion annually in current aggregate regulatory data reporting costs).[950] For all other categories of broker-dealers, the Commission estimates ongoing annual costs to be higher than currently reporting costs.

TABLE 9—AGGREGATE DATA REPORTING COSTS TO INDUSTRY

	Number	Current costs	CAT	
			Implementation	Ongoing
Central Repository	1	$0	$92,000,000	$134,900,000
Participants (all)	1	154,100,000	41,100,000	102,400,000
Service Bureaus (all, 13)	1	Unknown	118,200,000	Excluded
Broker Dealers:.				
Insourcers (126)	126	1,097,130,000	911,144,052	599,285,000
Outsourcers (806)	806	271,113,000	342,026,100	356,764,000
New Small Firms (799)	799	133,137,000	678,111,300	353,666,000
ELPs (14)	14	20,068,000	54,257,245	45,160,000
Options Market Makers (31)	31	44,437,000	120,141,043	99,998,000
Options Floor Brokers (24)	24	3,999,000	20,368,800	10,623,000
Total BD	1800	1,569,884,000	2,126,048,540	1,465,496,000
Total Industry		1,723,984,000	2,377,348,540	1,702,796,000

Although the Commission relied on an alternative to the Reporters Study data to estimate costs for most broker-dealers, the Commission's aggregate cost estimate is consistent with information presented in the Plan that suggests that ongoing costs under CAT would likely be lower than ongoing costs for current reporting systems.[951] The Plan, however, also discusses significant costs ($2.6 billion) for retirement of current regulatory reporting systems.[952]

The Commission has not included those costs in its estimate of the aggregate costs of the Plan for several reasons. First, for reasons discussed below, the Commission preliminarily believes that cost estimates provided in the Plan are unlikely to accurately represent the actual costs industry will face in retiring duplicative reporting systems. Second, the retirement of current regulatory reporting systems is not a requirement of the Plan and the timeline and process for their retirement is uncertain.[953] While the Commission's cost estimates do not recognize explicit system retirement expenses, it also does not explicitly recognize savings from elimination of these systems, though they are recognized qualitatively as additional benefits of the Plan. The Commission preliminarily believes that this approach is conservative in the sense that (for reasons that are discussed below) system retirement costs are likely to be mitigated by incorporation of current reporting infrastructure into CAT reporting infrastructure, while cost savings associated with industry's need to maintain fewer regulatory data reporting systems are not explicitly recognized. Finally, while the Commission does not include explicit system retirement costs, the Commission does recognize that industry will experience a costly period of duplicative reporting if the CAT NMS Plan is approved, and the Commission believes it is possible that these costs may be conflated with actual retirement costs estimated in the Plan. These reasons are discussed further below. As discussed above, the Commission preliminarily believes that retirement costs are unlikely to reflect actual costs to industry in eliminating duplicative reporting systems for several reasons. First, for the majority of broker-dealers that outsource, system retirement would affect few in-house systems; these broker-dealers are likely to adapt the systems that interface with service bureaus for current regulatory data reporting to interface for CAT Data reporting. Consequently, the Commission believes that, for these broker-dealers, costs to implement CAT reporting are likely to implicitly accomplish the retirement of older regulatory data reporting systems because these older systems will be transformed—in whole or in part—into systems that accomplish CAT reporting. Second, for broker-dealers that self-report regulatory data, the Commission cannot determine the source of the costs of system retirement that are estimated in the Plan. At its simplest level, ceasing reporting activities would include scrapping IT hardware dedicated to the endeavor and terminating the employees responsible for such regulatory data reporting.[954] The Commission recognizes that there are costs associated with those activities, but does not preliminarily believe their magnitude (estimated in the Plan as $2.6 billion) should approach or exceed the magnitude of costs of CAT implementation (estimated in this analysis as $2.4 billion). Although the Commission is uncertain what estimates were included in system retirement costs and the Commission recognizes that different survey respondents may have interpreted the question differently, the Commission preliminarily believes that the system retirement costs cited in the Plan might include industry estimates of an extended period of duplicative reporting costs, during which industry would report data to both CAT and to the systems that CAT would likely replace.

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[948] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iv)(A)(5).

[949] Approach 1 aggregate costs are higher than those for Approach 2 for all market participants except in one case where service bureaus have lower ongoing costs for Approach 1. In its discussion of industry (broker-dealer) costs, the Plan states that the cost differences between these two approaches are not statistically significant and that there would likely be no incremental costs associated with either approach. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C)(2)e.

[950] As discussed in Section IV.F.1.c(1), *supra*, the Commission preliminarily believes that cost estimates for Large Broker-Dealers presented in the Plan are reliable.

[951] *See* CAT NMS Plan, *supra* note 3, at Appendix C.

[952] *Id.* at Appendix C, Section B.7(b)(iv)(A)(5).

[953] *Id.* at Appendix C, Section C.9.

The Commission preliminarily believes that the period of duplicative reporting would likely constitute a major cost to industry for several reasons. These reasons include the length of the duplicative reporting period; constraints on the capacity of industry to implement changes to regulatory reporting infrastructure that might cause market participants to implement changes using less cost-effective resources; and the inability of some market participants to implement duplicative reporting in house, necessitating that they seek service bureau relationships to accomplish their CAT reporting requirements.

Based on data provided in the Plan, the Commission believes that the period of duplicative reporting anticipated by the Participants is likely to last for 2 to 2.5 years. The Commission preliminarily believes that these estimates are reliable because they reflect the Participants' experience with their historical rulemaking activity, although the Commission preliminarily believes that some steps outlined by the Participants might happen concurrently with Commission rulemaking required to facilitate ending some duplicative reporting. The Plan outlines a timeline for eliminating duplicative reporting.[955] The timeline begins when Industry Members (other than Small Industry Members) are required to begin reporting to the Central Repository. The elimination of duplicative reporting would require several steps: (1) The SROs would identify their respective duplicative SRO rules and systems; (2) the SROs would file with the Commission the relevant rule modifications or eliminations; (3) the Commission would review and consider such rule modification or elimination filings; and (4) subject to the requisite Commission approval, the SROs would then implement such SRO rule changes.

According to the Plan, step (1)—SRO identification of duplicative SRO rules and systems—of the process could take 12 to 18 months from implementation. SROs have 12 months (in the case of duplicative rules and systems) or 18 months (in the case of partially duplicative rules and systems) to complete their analysis of existing rules and systems to identify which systems should continue collecting data, or whether data in the Central Repository could substitute for the information collected through rules and systems in place.[956]

Certain SRO rules or systems identified by the SROs in step (1) might first necessitate an SEC rule change before the SROs can properly modify or eliminate such SRO rule or system. If so, Commission rulemaking may be required.[957] This step (1)—even for those SRO rule and system changes requiring Commission rulemaking—could still feasibly take less than 18 months total because the SRO's analysis of their rules and their corresponding SRO rule filings could be undertaken in parallel with any such related Commission rulemaking during this period.

According to the Plan, step (2) of the process could take 6 months. After identifying the rules to eliminate or modify, the Plan provides the Participants with six months to file the proposed rule change with the Commission. It is possible for the Participants to file these sooner if their rule changes are not complex, but the Plan places an upper bound on this. Under this timeline, it could take 18 months to two years after the first broker-dealers start reporting to the Central Repository for Participants to file rules to eliminate duplicative reporting.[958]

According to the Plan, step (3) of the process could take another 3 months to a year. The Commission recognizes that the approval process for Participant rule changes can take time. In particular, for the Commission to approve such rules could take another 3 to 12 months depending on how complex the rule change. However, the Commission preliminarily expects that as long as such rule changes would be fairly straight forward, approval would likely take 3 months or less. As such, the first three steps add up to 21 months to 27 months.

Step (4) involves implementing the Participant rule changes, which would eliminate duplicative reporting. The Plan states that Participants would, upon Commission approval of rule changes, implement the ". . . most appropriate and expeditious timeline . . . for eliminating such rules and systems." [959] The Commission preliminarily believes that the elimination of duplicative reporting will require significant planning and implementation, but believes that much of the required planning is likely to happen concurrently with the Commission approval process of the underlying SRO rules. Consequently, the Commission preliminarily believes that actual implementation could occur as soon as 90 days after approval, and is not likely to occur more than six months after approval. The Plan also states that Participants should consider in setting an implementation timeline, when the quality of CAT Data would be sufficient to meet surveillance needs. In addition, reducing some duplicative reporting could require changing Participant rules in response to the elimination or modification of Commission Rules.

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[954] Based on discussions with industry, the Commission believes that industry is likely to implement the CAT NMS Plan by repurposing systems and employees currently assigned to other regulatory data reporting. The cost of eliminating these resources, however, should provide an upper bound to what actual system retirement costs would be, because eliminating these resources is an available and effective means of retiring these systems; market participants could choose other methods if they are preferable in terms of reducing costs of system retirement or CAT implementation. *See supra* note 880.

[955] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9. The elimination of duplicative reporting may or may not involve actually retiring IT systems. If current regulatory data reporting systems are adapted to report CAT Data, some of these systems may continue to also report duplicative data during the period of duplicative reporting. In such a case, system retirement would involve no longer using these systems to report the duplicative data and any savings may be associated with no longer requiring staff to maintain the software and systems that support the duplicative reporting.

[956] The Plan notes that if a Participant determines that sufficient data is not available to complete the analysis, a subsequent date could be identified for such a determination to be made.

[957] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9. For example, Commission rules that require broker-dealers to be able to report Large Trader or EBS data would prevent SROs from changing their rules to eliminate this capability. *See id.* Consequently, the timeframe for retirement of these systems may also be dependent on Commission rulemaking. The Commission recognizes that during the comment period of any SEC rulemaking, SROs might begin their analysis of their own rules and preparation of potential filings, possibly compressing this timeline further.

[958] It could also take longer if the Participant determines that sufficient data is not available to complete such analysis by 12 or 18 months after Industry Member reporting to the Central Repository commences.

[959] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9.

Based on the timelines for all four steps and the Commission's analysis of how this timeline would be affected by the need in some cases for Commission rulemaking, the Commission preliminarily believes that the period of duplicative reporting could last at least 2 years, and the period of system retirement could extend for up to 2.5 years after Industry Members begin reporting data, assuming SROs are not limited in their initial analysis by problems such as delays in Commission rulemaking or excessive Error Rates, and Commission approval of SRO rules is completed within 90 days of submission.

Second, industry-wide resources to update order-handling systems are limited. Based on conversations with market participants, the Commission preliminarily believes that while most Insourcers and service bureaus have permanent staff that specialize in these activities, some would rely on hiring additional staff or utilizing contractors to increase their capacity to implement changes to order handling and data reporting systems and support of duplicative reporting systems. Furthermore, multiple broker-dealers and service providers cited access to specialized staff as a constraint that limits their ability to implement regulatory rule changes, stating that while current and newly hired staff might be able to implement the CAT NMS Plan and continue supporting OATS, they would be unlikely to be able to continue to implement changes to both systems. Consequently, Insourcers and service bureaus would likely incur significant costs associated with hiring additional employees to implement the CAT NMS Plan and accomplish regulatory data reporting during any duplicative reporting period.

Third, the Commission preliminarily believes that some firms that are currently challenged to maintain their self-reporting of data may not have the resources to implement the CAT NMS Plan at the same time as current reporting absent a service bureau relationship. It is possible that a number of relatively large firms would seek to establish service bureau relationships to accomplish both CAT reporting and current reporting even as a number of very small firms that currently do not report OATS could seek to establish such relationships. This could precipitate a "crowded entrances" situation in the market to provide data reporting services. The establishment of these relationships would pose a significant cost to industry.[960]

The Commission expects that there would be some cost efficiencies with respect to current data reporting costs and CAT reporting costs during any period of duplicative reporting. For example, servers hosting software to produce records for CAT could possibly also host software to produce records for OATS during the duplicative reporting period because these regulatory reporting systems rely upon much of the same underlying data. However, the Commission does not currently have the necessary data to determine the extent of these efficiencies, which would vary across market participants. Therefore, the Commission cannot estimate duplicative reporting costs. The Commission preliminarily believes, however, that the current data reporting costs of $1.7 billion per year constitutes an estimate of the cost per year to industry of duplicative reporting requirements, as it represents the cost of duplicative reporting to industry if there are no efficiencies. The Commission notes, however, that staff required to implement changes to order handling systems are a limited resource. If market participants do not have adequate staffing to implement the changes required by CAT and maintain duplicative reporting, costs for duplicative reporting could exceed current reporting costs because market participants could have to rely on external staff (such as consultants) or contract through service bureaus to accomplish this reporting; this is likely to be more expensive than staff used for current reporting.

Further, the Commission does not believe that duplicative reporting costs should be added to the estimated aggregate costs of the CAT NMS Plan. The Commission believes that the aggregate costs above represent the total costs of the Plan and do not account for the differential between these costs and the costs the industry currently incurs for regulatory data reporting and maintenance. During the period of duplicative reporting, industry would incur the aggregate costs of accomplishing CAT reporting described above, plus the costs of current data reporting, which the Commission uses as an estimate of duplicative reporting costs. The Commission notes that market participants will incur costs equal to current data reporting costs if the Plan were not approved (because current regulatory data reporting would continue), or as duplicative reporting costs if the Plan were approved. Consequently, the Commission preliminarily believes these costs should not be considered as costs attributable to approval of the Plan, because market participants would bear these costs whether the Plan is approved or disapproved.

While broker-dealers are anticipated to bear the burden of the costs associated with CAT, including implementation costs, ongoing costs and duplicative reporting costs, the Commission does not know whether these costs would be passed on to investors, or whether these costs would be absorbed by the broker-dealers themselves. On one hand, it could be assumed that broker-dealers could pass on the costs associated with CAT to investors because broker-dealers currently already pass on certain regulatory fees to their customers. For instance, the SROs have adopted rules that require broker-dealer to pay Section 31 transaction fees,[961] and some of these broker-dealers have in turn imposed fees on their customers in order to provide funds to pay for the fees owed to the SROs. However on the other hand, if the passing on of these costs is associated with higher fees, a given broker-dealer could decide to absorb these costs and not increase their fees, and by doing so, they may attract more customer order flow. The incremental order flow that the broker-dealer attracts from having lower fees relative to their competitors may indeed offset the costs associated with CAT that they incur by not passing these on to their customers. Other broker-dealers, cognizant that they could lose order flow to other broker-dealers that do not pass on the costs to their customers could strategically respond and thus, could also absorb these costs. Ultimately, the Commission does not know which situation is more likely to eventuate, primarily because the Commission generally does not know the cost structure of broker-dealers.

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[960] *See supra* note 934 and Section IV.G.1.d, *infra*.

[961] Under Section 31 of the Securities Exchange Act of 1934, SROs and all the national securities exchanges must pay transaction fees to the Commission based on the volume of securities that are sold on their markets. These fees are designed to recover the costs incurred by the government, including the Commission, for supervising and regulating the securities market and securities professionals. *See* "SEC Fee—Section 31 Transaction Fees," *available at https://www.sec.gov/answers/sec31.htm*.

3. Further Analysis of Costs

a. Costs Included in the Estimates

In general, the CAT NMS Plan does not break down its cost estimates as a function of particular CAT NMS Plan requirements, although it does provide some cost information for certain requirements in the Plan. However, the Commission has considered which elements of the CAT NMS Plan are likely to be among the most significant contributors to CAT costs. The Commission preliminarily believes that significant sources of costs would include the requirement to report customer information, the requirement to report certain information as part of the material terms of the order, the requirement to use listing exchange symbology, and possibly, the inclusion of Allocation Reports. The Commission preliminarily believes that the clock synchronization requirements, the requirement that Options Market Makers send quote times to the exchanges, the requirement that the Central Repository maintain six years of CAT Data, and the inclusion of OTC Equity Securities in the initial phase of the implementation of the CAT NMS Plan are unlikely to be significant contributors to the overall costs of the Plan. Notably, the Commission believes that its estimates of the implementation costs and ongoing costs to industry above include each of the costs discussed in this Section because these provisions encapsulate major parts of the Plan.

The Commission preliminarily believes that the requirement in the CAT NMS Plan to report customer information for each transaction represents a significant source of costs.[962] In particular, the adapting of systems to report customer information that is not included in current regulatory data on a routine basis could require significant and potentially difficult reprogramming because current audit trail data does not routinely provide this information. Consequently, this reprogramming could require gathering information from separate systems within a broker-dealer's infrastructure and consolidating it in one location, and redesigning an IT infrastructure to satisfy this requirement could interrupt other workflows within the broker-dealer, expanding the scope of systems that must be altered to accomplish CAT reporting. While the Commission preliminarily believes that the requirement to report customer information would be a significant source of costs, the Commission lacks the necessary information to estimate what proportion of the costs of the Plan are attributable to this requirement. The Plan does not provide information on the costs attributable to the reporting of customer information, and the Commission has no other data from which it can independently estimate these costs, because the Commission is not aware of any data currently available to it regarding the number of broker-dealers that would need to engage in significant reprogramming in order to report customer information as required in the Plan, or the costs of doing so. The Commission therefore seeks comment on the costs that would be attributable to the requirement to report customer information as set out in the CAT NMS Plan. The Commission also notes that the Plan reflects exemptive relief granted by the Commission in connection with this requirement. Specifically, as discussed further in the Alternatives Section, the Commission granted exemptive relief from certain requirements of Rule 613 to allow the alternative approach to customer information that leverages existing identifiers to be included in the Plan and subject to notice and comment.[963] Based on cost survey data provided by the Participants, this approach would reduce quantifiable costs to the top three tiers of CAT Reporters by at least $195 million as compared to an approach that followed requirements of Rule 613 as adopted.[964]

Similarly, the Commission preliminarily believes that the requirement to report material terms of the order that include an open/close indicator, order display information, and special handling instructions represents a significant source of costs.[965] Not all broker-dealers are currently required to report these elements on every order and no market participants report an open/close indicator on orders to buy or sell equities. Thus, the adapting of some market participants' systems to report this information for each transaction could require significant and potentially difficult reprogramming that requires centralizing or copying information from multiple IT systems within the broker-dealer. As discussed above, redesigning a broker-dealer's IT infrastructure could disrupt multiple workflows and dramatically increase the costs associated with implementing the changes required by CAT. While the Commission preliminarily believes that this reprogramming would be a significant source of implementation costs, the Commission lacks the necessary information to estimate what proportion of the costs of the Plan are attributable to this requirement. The Plan does not provide information on the costs attributable to these elements of the Plan, and the Commission has no other data from which it can independently estimate the costs, because the Commission is not aware of any data currently available to it regarding the number of broker-dealers that would need to engage in significant reprogramming in order to report this information as required in the Plan, or the costs of doing so. The Commission therefore seeks comment on the costs that would be attributable to reporting the material terms of the order as set out in the CAT NMS Plan, including an open/close indicator, order display information, and special handling instructions.

The Commission also preliminarily believes that the requirement to use listing exchange symbology in the CAT NMS Plan could represent a significant source of costs. The Plan requires CAT Reporters to report CAT Data using the listing exchange symbology format,[966] which would also be used in the display of linked data; because broker-dealers do not necessarily use listing exchange symbology when placing orders on other exchanges or off-exchange, this requirement could require broker-dealers to perform a translation process on their data before they submit CAT Data to the Central Repository.[967] The translation process could be costly to design and perform and result in errors that would be costly for the broker-dealers to correct. If other elements of the Plan were to necessitate a translation, then the listing exchange symbology could be fairly low cost because it would be just another step in the translation. However, if the Plan has no other requirement that would necessitate a translation, the costs of including listing exchange symbology on all CAT reports would include the costs of designing and performing the translation as well as the costs of correcting any errors caused by the translation. While the Commission preliminarily believes that the requirement to use listing exchange symbology could be a significant source of costs, the Commission lacks the necessary information to estimate what proportion of the costs of the Plan are attributable to this requirement. The Plan does not provide information on the costs attributable to this particular element of the Plan, and the Commission has no other data from which it can independently estimate these costs, because the Commission is not aware of any data currently available to it regarding the number of broker-dealers that would need to undertake the translation process, either as a result of this or other elements of Plan, or the costs of doing so. The Commission seeks comment on the costs that would be attributable to the requirement to report CAT Data using listing exchange symbology format as set out in the CAT NMS Plan.

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[962] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1.a.iii.

[963] *See* Exemption Order, *supra* note 18.

[964] *Id.* at 17–18.

[965] *See* CAT NMS Plan, *supra* note 3, at Article I.

[966] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1.a.

[967] For example, class A shares of ABC Company might be traded using ticker symbol "ABC A" on one exchange, "ABC_A" on another exchange, and "ABC.A" on a third. As written, the Plan would require all broker-dealers to use the listing exchange's symbol for its Central Repository reporting, regardless of the symbol in the order messages received or acted upon at the broker-dealer or exchange.

The Commission recognizes that industry would bear certain costs associated with Allocation Reports, particularly the requirement that the reports include allocation times. The Commission understands that some broker-dealers already record allocation times; broker-dealers that do not currently record these times will face implementation costs associated with changing their business processes to record these times. Implementation costs for allocation reporting may include significant costs associated with incorporating additional systems into their regulatory data reporting infrastructure to facilitate this reporting, if such systems would not already be involved in recording or reporting order events. Furthermore, Outsourcers could face significant implementation and ongoing costs associated with reporting Allocation Reports if their service bureaus do not extend their services to manage the servers that handle allocations. Because implementation costs for Allocation Reports would vary widely across broker-dealers and because the Plan does not break out costs associated with reporting allocation information, the Commission cannot separately estimate costs attributable to this reporting.

The Commission preliminarily believes that the clock synchronization requirements in the Plan represent a less significant source of costs. The CAT NMS Plan estimates industry costs associated with the 50 millisecond clock synchronization requirement, based on the FIF Clock Offset Survey.[968] The FIF Clock Offset Survey states that broker-dealers currently spend $203,846 per year on clock synchronization activities, including documenting clock synchronization events.[969] The FIF Clock Offset Survey states that firms expect the 50 millisecond requirement to increase those costs by $109,197 per firm.[970]

Based on discussions with industry, the Commission preliminarily believes that the majority of broker-dealers (Outsourcers) would not face significant direct costs for clock synchronization because time stamps for CAT Data reporting would be applied by service bureaus.[971] However, the Commission preliminarily estimates there are 171 firms that make the insourcing-outsourcing decision on a discretionary basis;[972] if these firms decide to insource their data reporting under CAT, each of these firms is likely to face costs associated with complying with new clock synchronization requirements. The Commission preliminarily estimates that industry-wide implementation costs for the 50 millisecond clock synchronization requirement would be $268 million, with $25 million annually in ongoing costs.[973] The Commission preliminarily believes that approximately $19.7 million in broker-dealer implementation costs would be attributable to clock synchronization requirements.[974] The Commission also preliminarily believes that service bureaus would face similar clock synchronization costs if the CAT NMS Plan is approved. Using 13 as an estimate of the number of service bureaus, approximately $1.4 million in service bureau implementation costs would be attributable to clock synchronization requirements in the Plan.[975]

Other Plan requirements that the Commission preliminarily believes are unlikely to represent major contributions to the overall costs of the Plan include the requirement that Options Market Makers report the quote times sent to the exchanges,[976] which the Plan estimates would cost between $36.9 million and $76.8 million over five years; the requirement to maintain six years of data at the Central Repository, which the Plan estimates would cost $5.59 million,[977] and the inclusion of OTC Equity Securities in the initial phase of the implementation of the CAT NMS Plan.[978]

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[968] *See* CAT NMS Plan, *supra* notes 3, at Section D.12, and note 127. The Commission notes that the survey has two limitations pertinent to specific cost estimates provided in the summary of survey results. First, cost estimates are likely to be significantly downward biased. Individual responses to cost data were gathered within a range; for example, a firm would quantify its expected costs as "Between $500K and less than $1M" or "$2.5M and over". When aggregating these responses, FIF generally used the range midpoint as a point estimate; however, for the highest response, the range minimum was used (*i.e.*, "$2.5M and over" was summarized as $2.5M.) This is likely to have produced a significant downward bias in aggregate survey responses. Second, the survey includes only broker-dealers and service bureaus, thus the data excludes exchanges. The Commission preliminarily believes this limitation would not significantly impact industry costs because all exchanges currently maintain clock synchronization standards finer than those discussed as alternatives.

[969] *See* FIF Clock Offset Survey, *supra* note 127. This is based on the current practice of the broker-dealers who responded to the survey.

[970] *See id.* at 16. The $109,197 figure is obtained by subtracting the cost of maintaining current clock offsets of $203,846 annually from the estimated per-firm annual cost of maintaining a 50 millisecond clock offset of $313,043; *see also id.* at 7 ("Even where firms were at the target clock offset, many firms cited additional costs associated with compliance including logging and achieving greater degrees of reliability").

[971] *See* Section IV.F.1.d for discussion of service bureau costs and the degree to which those costs might be passed on to broker-dealers.

[972] These are the 126 current OATS reporters that report more than 350,000 OATS ROEs per month; the 31 options market-making firms; and the 14 ELPs.

[973] *See* Section IV.H.2.a(1), *infra,* for a discussion of how these implementation costs might vary for different clock synchronization standards.

[974] *See id.*, for discussion of costs attributable to the 50 millisecond clock synchronization tolerance proposed in the Plan, including the $109,197 estimate of per-firm implementation costs of the 50 millisecond clock synchronization requirement; *see also* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(A)(3). 171 broker-dealers × $109,197 = $18,672,687.

[975] The CAT NMS Plan states that the Vendor Study was distributed to 13 service bureaus or technology-providing firms identified by the DAG. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(A)(3). 13 service bureaus × $109,197 = $1,419,561. The Commission believes clock synchronization costs are already included in cost estimates provided in the Vendor Study. As discussed above (*see* Section IV.F.1.d), the Commission believes it is likely that these costs would ultimately be passed on to service bureaus' broker-dealer clients.

[976] *See* FIF, SIFMA, and Security Traders Association, Cost Survey Report on CAT Reporting of Options Quotes by Market Makers (November 5, 2013), *available at http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupport docs/p601771.pdf*; *see also* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iv)(B).

[977] *See* CAT NMS Plan, *supra* note 3, Section 12(m).

[978] *See id.* at Section 12(q). The Commission does not have the information necessary to precisely estimate the costs that are incurred by including OTC Equity Securities in the initial phase of the implementation of the CAT NMS Plan, because the Plan does not separately present the costs associated with OTC Equity Securities. Because of low trading activity in the OTC equity markets, any significant costs associated with including OTC Equity Securities would be in implementation costs. Further, broker-dealers that implement CAT Data reporting for NMS securities may not incur

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There are many other categories of costs that contribute to the aggregated estimates of the costs of the Plan in addition to the items discussed above. For example, in addition to providing CAT Reporters data on their Error Rates, the Plan states that the Participants believe that in order to meet Error Rate targets, industry would require certain resources, including a stand-alone testing environment, and time to test their reporting systems and infrastructure. There are also likely to be costs related to the Plan Processor's management of PII.[979] As noted above, the Commission does not have sufficient information to analyze each individual category of costs, because the available cost estimates do not reflect a detailed breakdown of the expected cost of each element of the CAT NMS Plan. However, the Commission preliminarily believes that its estimates of implementation costs and the ongoing costs of the CAT NMS Plan reflect all relevant costs to industry.

b. Fees

The Plan states that the Operating Committee would have the authority to levy ancillary fees on both broker-dealers reporting to, and regulators accessing, the Central Repository.[980] The Commission believes that ancillary fees levied on broker-dealers are unlikely to be levied broadly, because discussion in the Plan associates these fees with late and/or inaccurate reporting. The Plan also discusses ancillary fees possibly levied on regulators associated with the use of Central Repository data. The Commission recognizes that costs estimated in Bids for constructing and operating the Central Repository already anticipate use of the CAT Data by regulators, and that additional fees to access the data might give regulators incentives to make less use of the data than anticipated in the Benefits Section. However, any fee schedule proposed by the Participants would be filed with the Commission. Consequently, the Commission does not believe that the provisions for ancillary fees would likely significantly impact the costs or benefits of CAT.

4. *Second-Order Effects and Other Security-Related Costs*

a. Security

As noted in the Adopting Release, Commenters have expressed concerns regarding the risk of failing to maintain appropriate controls over the privacy and security of CAT Data.[981] The Commission recognizes that investors and market participants could face significant costs if CAT Data security were breached.

The Commission believes that it is difficult to form reliable economic expectations for the costs of security breaches, because there are few examples of security breaches analogous to the type that could occur under the CAT NMS Plan. However, the Commission can break down the expected costs of security breaches into two components: The risk of a security breach and the cost resulting from a security breach. Therefore, the Commission separates its discussion of the expected costs of security breaches into these two components. The Commission recognizes that security risks could give rise to second order costs as well where the costs come not directly from the security breach but rather from the actions of market participants attempting to avoid security risks.

(1) Costs of a Security Breach

The form of the direct costs resulting from a security breach would vary across market participants and could be significant. For broker-dealers, investment advisers, and other similar institutions, a security breach could leak highly-confidential information about trading strategies or positions,[982] which could be deleterious for market participants' trading profits and client relationships. A data breach could also expose the proprietary information about the existence of a significant business relationship with either a counterparty or client, which could reduce business profits.

A data breach could also potentially reveal PII of Customers. Because some of the CAT Data that would be stored in the Central Repository would contain PII such as names, addresses and social security numbers, a security breach could raise the possibility of identity theft, which currently costs Americans billions of dollars per year.[983] Because PII would be stored in a single, centralized location rather than stored across multiple locations, a breach in the Central Repository could leak all PII, rather than a subset of PII that could be leaked if the information was stored in multiple locations. As such, these costs associated with the risk of a security breach could be substantial in aggregate.[984]

A breach that reveals the activities of regulators within the Central Repository, such as data on the queries and processes run on query results, could compromise regulatory efforts or lead to speculation that could falsely harm the reputation of market participants and investors. For example, a breach could result in an article that reports on regulators querying trading information of certain individuals or broker-dealers, which could harm those individuals or broker-dealers even if no regulators open investigations. Further, perpetrators of a breach could attempt to trade on information on regulatory queries to try to profit ahead of public information of an action, to the disadvantage of other investors.

(2) Risk of a Security Breach

The Commission preliminarily believes that the risks of a security breach may not be significant because certain provisions of Rule 613 and the

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significant additional costs to implement CAT Data reporting for OTC Equity Securities.

[979] The Commission also acknowledges that the costs associated with handling PII could create an incentive for service bureaus not to offer CAT Reporting services. The Commission does not believe that this incentive would significantly alter the services available to broker-dealers. For further discussion, *see supra* note 920 and Section IV.G.1.e, *infra*. The Commission also notes that, pursuant to the exemptive relief granted by the Commission, the approach to the reporting of Customer information in the CAT NMS Plan could allow for the bifurcation of PII reporting from the reporting of order data. *See* Exemption Order, *supra* note 18, at 11858–63.

[980] *See* CAT NMS Plan, *supra* note 3, at Section 11.3(c).

[981] *See* Adopting Release, *supra* note 9, at 45725, 45756–58.

[982] Although the Plan does not require reporting positions, observation of a broker-dealer's recent executions can offer information about their change in position, or, potentially, information about their actual position if the audit trail information breached contains all trading activity since the creation of the position.

[983] According to survey data, the Bureau of Justice Statistics reported $24.7 billion in identity theft costs in 2012, *available at http://www.bjs.gov/content/pub/press/vit12pr.cfm*.

[984] At a June 23, 2015 congressional hearing titled, "Government Personnel Data Security Review", Office of Personnel Management (OPM) Director Katherine Archuleta estimated the direct costs of the OPM data breach at $19 to $21 million. *Available at http://www.c-span.org/video/?326710-1/opm-director-katherine-archuleta-testimony-spending-data-security&start=3304*. This breach of PII of current and former federal employees exposed PII for approximately 4 million individuals. *Available at http://www.federaltimes.com/section/OPM-Cyber-Report/*. The Commission recognizes that the number of individuals whose PII would be stored in the Central Repository far exceeds the number of federal employees whose data was exposed in the OPM breach, and that these costs include only the direct costs (such as the provision of credit monitoring services to affected individuals) incurred by OPM and do not reflect the total costs that these individuals may face as a result of the data breach, which could be far larger than the direct costs faced by OPM. These indirect costs may include the consequences of the breach as well as costs of credit fraud and legal services to address consequences of the data breach. There may also be second-order effects to such a breach, if investors reduce their engagement with the securities industry to avoid these costs. *See* Section IV.F.4.a(3), *infra*.

CAT NMS Plan appear reasonably designed to mitigate these risks. However, the Commission notes that the considerable diversity in the potential security approaches of the bidders creates some uncertainty about the effectiveness of the eventual security procedures and hence, the risk of a security breach.[985]

Provisions of Rule 613 provide safeguards designed to prevent security breaches. Rule 613(e)(4) requires policies and procedures that are designed to ensure the rigorous protection of confidential information collected by the Central Repository, and Rule 613(iv) requires that the Plan contain a discussion of the security and confidentiality of the information reported to the Central Repository. Rule 613 also restricts access to use only for regulatory purposes, and requires certain provisions that are designed to mitigate these security risks such as the appointment of a Chief Compliance Officer and annual audits of Plan Processor operating procedures.

The Plan also includes provisions designed to prevent security breaches. First, governance provisions of the CAT NMS Plan could mitigate the risk of a security breach. Section 4.12 of the CAT NMS Plan provides for a Compliance Subcommittee whose activities could reduce the risk that information is released to unauthorized entities.[986] Among the Subcommittee's responsibilities is "the maintenance of the confidentiality of information submitted to the Plan Processor or Central Repository." Furthermore, the Plan Processor is required to submit a comprehensive security plan to the Operating Committee and update this security plan annually.[987] The security plan must cover all components of CAT, including physical assets and personnel; the plan "must document how the Plan Processor would protect, monitor and patch the environment; assess it for vulnerabilities as part of a managed process, as well as the process for response to security incidents and reporting of such incidents."[988] In addition, Section 6.2(b) of the Plan establishes a Chief Information Security Officer who is responsible for monitoring and addressing data security issues for the Plan Processor. Second, the Plan includes specific provisions designed to ensure the security of data in flight. For instance, the Plan requires that bulk extract data be encrypted, password protected and sent via secure methods of transmission.[989] Third, Section 6.7(g) of the Plan requires that the Participants establish, maintain, and enforce written policies and procedures reasonably designed to (1) ensure the confidentiality of the CAT Data obtained from the Central Repository; and (2) limit the use of CAT Data obtained from the Central Repository solely for surveillance and regulatory purposes. Finally, the Plan makes further provisions designed to provide security for PII. For example, regulators authorized to access PII would be required to complete additional authentications, and PII would be masked unless users have permissions to view PII.[990]

As discussed in the Plan,[991] the Participants collected information from the Bidders regarding security and confidentiality during the RFP process, however, there was considerable diversity in the approaches proposed by the Bidders and the Participants chose to give the Plan Processor flexibility on many implementation details and state the requirements as a set of minimum standards. These requirements include both general security and PII treatment requirements. General security requirements are designed to address physical security, data security during transmissions, transactions, and while at-rest, confidentiality, and a cyber-incident response plan. PII requirements include a separate PII-specific workflow, PII-specific authentication and access control, separate storage of PII data, and a full audit trail of PII access.[992] Because many of the decisions that define security measures for the Central Repository are coincident with the selection of the Plan Processor, there is a degree of uncertainty with regards to security measures that would be implemented by the Plan Processor. Consequently, there is uncertainty about the significance of the risks, the expected costs of a breach when considering the likelihood of a data breach,[993] and the second-order effects.

The Commission preliminarily believes the Plan marginally increases the threat of breach of broker-dealer trading and business strategies because although SROs currently receive this data from their own members, SROs are expected to have access to other SROs data more readily within the Central Repository. There is some risk that SROs could use this data improperly to gain information on how broker-dealers interact with other SROs' trading platforms. The Plan includes certain measures that mitigate this risk, however, by restricting the use of CAT Data reported by other entities for business purposes.[994]

(3) Second Order Effects

The desire to avoid direct costs of a security breach could motivate actions that would result in second order effects of security breaches. For example, if service bureaus perceive the costs and risks of a security breach to be great enough because of the addition of PII in the data, which is not included in current data, some could decide not to provide CAT Data reporting services. This could increase the potential for a short term strain on capacity and exacerbate the costs of this strain described above and below.[995] Further, investors or other market participants could move their activity off-shore or cease market participation altogether to avoid having sensitive information stored in the Central Repository. Consequences of changes in investor behavior in response to the threat of a breach include: Investors holding suboptimal portfolios; lost profits to the securities industry; and higher costs of raising capital for U.S.-based securities issuers, if the public's willingness to participate in capital markets is sufficiently reduced.[996]

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[985] The Commission notes that, at a minimum, the security of the CAT Data must be consistent with Regulation Systems Compliance and Integrity under the Exchange Act ("Reg SCI") (17 CFR 242.1000 to 1007).

[986] *See* CAT NMS Plan, *supra* note 3, at Section 4.12.

[987] *Id.* at Section 6.12.

[988] *See id.* at Appendix D, Section 4.

[989] *See id.* at Appendix D, Section 8.2.2.

[990] *See id.* at Appendix C, Section A.2(c).

[991] *See id.* at Appendix C, Section A.4; Appendix D, Section 4.

[992] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 4.1.2–4.1.6.

[993] One study of 62 U.S. companies experiencing data breaches in 2015 puts the average cost per stolen record containing personal or sensitive information at $217; the average number of breached records per incident was 28,070. *See* Ponemon Institute, *2015 Cost of Data Breach Study: United States* (May 2015) (noting, however, that the study specifically excluded breaches of over 100,000 records as not representative of "typical" data breaches). As one example of a large data breach, Target Corporation's 2013 data breach affecting 40 million credit card numbers and 70 million other records containing PII had, as of January 2015, resulted in $252 million of related expenses for Target. *See* Target Corporation, Form 10–K for the Fiscal Year ended January 31, 2015 (March 13, 2015). Because it is not clear what the risk of a breach would be for CAT, in terms of either likelihood or magnitude, these types of numbers are simply indicative; it is impossible to estimate with any precision what the cost of a breach might be. For example, a complete breach of the CAT System, including the PII storage, might expose records an order of magnitude larger than the Target breach; however the types of records stored in CAT could be more difficult to exploit than credit card information, but their exploitation might prove far more damaging to individuals and entities whose trading information, for example, were compromised.

[994] Rule 613(e)(4)(1)(A) states that Participants and the Plan Processor "agree not to use such data for any purpose other than surveillance and regulatory purposes, provided that nothing in this paragraph (e)(4)(i)(A) shall be construed to prevent a plan sponsor from using the data that it reports to the central repository for regulatory, surveillance, commercial, or other purposes as otherwise permitted by applicable law, rule, or regulation." Similar language appears in the CAT NMS Plan. The Commission preliminarily believes this provision does not increase security risks because the data reported to the Central Repository by a Participant is already available to that Participant. *See* CAT NMS Plan, note 3, *supra*, at Section 6.5(f)(i)(A).

[995] *See supra* note 934 and Section IV.G.1.d, *infra*.

Nonetheless, the Commission preliminarily does not believe that the effect of the Plan on the risk or costs of a data breach would be great enough to result in significant second order effects. As discussed above, the Commission preliminarily believes the Plan marginally increases the threat of breach of broker-dealer trading and business strategies. However, the Plan includes certain measures that mitigate this risk. In light of these provisions, the Commission preliminarily believes that the Plan is unlikely to significantly deter broker-dealers from participating in markets. In addition, in deciding whether to trade in the U.S. markets or abroad, investors and other market participants would continue to assess a multitude of potential trade-offs. While the expected costs of a security breach may factor in, so would the level of investor protections, which the Commission preliminarily believes would increase if it approved the Plan.[997]

Another possible second order effect of avoiding the risk and cost of a security breach event could be the risk that one or more service bureaus could choose to exit the market in providing data reporting services rather than change their business practices to report PII to the Central Repository, in order to assist their client(s) in meeting their reporting responsibilities under the Plan. Specifically, while some service bureaus currently handle PII for their broker-dealer clients, others do not or do so only on an occasional and limited basis. To the extent service bureaus that do not already handle such PII were to stop offering regulatory data reporting services due to an unwillingness to host such customer information, their customers would be forced to establish new service bureau relationships, or undertake self-reporting. This potentially would be very costly to the broker-dealer clients of the exiting service bureaus due to the switching costs that broker-dealers incur to change service bureaus. Such an event could also contribute to crowded entrances problems.[998] As noted above, however, the approach in the Plan to the reporting of customer information could allow for the bifurcation of PII reporting from the reporting of order data, which could affect a service bureau's decision whether to exit the market for reporting services to a broker-dealer client.[999] While the Commission cannot rule out that one or more service bureaus could choose to exit the data reporting services market to avoid the costs of a potential security breach, the Commission preliminarily believes that such exits are unlikely. In addition, the Commission preliminarily believes that security breach risks are unlikely to result in service bureau exit because the market for regulatory data reporting services is generally expanding and the trend is for more, not less, outsourcing.[1000] Consequently, the Commission preliminarily believes that market share in this market is valuable and existing competitors are unlikely to voluntarily exit the market abruptly.

b. Changes to CAT Reporter Behavior

The Commission acknowledges that increased surveillance could potentially impose some costs by altering the behavior of market participants. Benefits could accrue to the extent that improved surveillance, investigation, and enforcement capabilities allow for regulators to better identify and address violative behavior when it occurs; and to the extent that common knowledge of improved capabilities deters violative behavior.[1001] Costs could accrue to the extent that some forms of market activity, which are permissible and economically beneficial to the market and investors, could come under higher scrutiny, which could create a disincentive to engage in that activity.

In particular, the Commission acknowledges that some market participants could reduce economically beneficial behavior if those market participants believe that, because of enhanced surveillance, their activities would increase the level of regulatory scrutiny that they bear. In other words, if market participants engaging in non-violative activity believe that such activity could increase the likelihood of examinations, inspections, and other interactions with regulators, those market participants could reduce or cease such activity to reduce the frequency and costs of interactions with regulators, including staff time to accommodate inspections, facilitate examinations and answer regulatory inquiries. Because facilitating regulatory inquiries is costly to firms, such a firm might conclude that certain permissible activities generate insufficient profits to offset costs associated with the regulatory scrutiny generated by these activities, even if the firm's behavior is permissible and no fines or other penalties result from these inquiries. To the extent that market participants could reduce activity that benefits the market, this could impose costs on investors and the market in the form of a reduction in the economic value of such activity.

Additionally, in an environment of improved surveillance, regulators could increase the number of inspections, examinations and enforcement proceedings that they initiate.[1002] To the extent that these activities result in a reduction in violative behavior, the market benefits in not bearing the costs of this behavior. To the extent, however, the additional regulatory activity increases the number of inspections, examinations and enforcement on permissible activities,[1003] market participants would incur the increased costs of facilitating these regulatory inquiries. The Commission preliminarily believes, however, that these costs would be offset by other effects of CAT such as fewer ad hoc data requests, improvement in regulators' precision in selecting firms for risk-based exams, and other efficiency improvements, and that the related savings would likely be greater than such costs in aggregate.

c. Tiered Funding Model

The Commission preliminarily believes that establishing a small number of discrete fee tiers, as occurs under the Plan, could create incentives for CAT Reporters to alter their behavior to switch from one tier to another, thereby qualifying for lower fees. Specifically, in the discussion of Consideration 7, the Plan states that CAT Reporters would be classified into a number of groups based on reporter type and market share of share volume or message traffic and assessed a fixed fee that is determined by this classification.[1004] The higher-activity groups would be assessed higher fees.

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[996] *See* Section IV.G.3, *infra*.

[997] *See* Section IV.E.2, *supra*.

[998] *See supra* note 934.

[999] *See supra* note 979.

[1000] *See* Section IV.G.1.d, *infra*.

[1001] *See* Section IV.E.2.c, *supra*.

[1002] *See* Section IV.E.2.c, *supra*.

[1003] For example, the Commission preliminarily believes that the Plan would improve the efficiency and effectiveness of risk-based exams. However, because the efficiency could increase the total number of risk-based exams, the total number of exams on permissible activity could go up even if the percentage of exams on permissible activity goes down.

[1004] *See* CAT NMS Plan, *supra* note 3, at Section 11.3 and Appendix C, Section B.7(b)(4)(C).

Equity Execution Venues would be classified into 2–5 fee tiers based on market share of share volume, option Execution Venues would be classified into a separate set of 2–5 fee tiers based on market share of share volume, and Industry Members would be classified into another set of 5–9 fee tiers based on message traffic.[1005] That is, the Plan describes a funding policy with a tiered funding model that places market participants who fall into the lower tiers at a fee advantage over the market participants that fall into the higher tiers.[1006] The Plan states that this funding model is designed to reward the characteristics—small market share of share volume in the case of Execution Venues, low message traffic in the case of broker-dealers—that would enable CAT Reporters to qualify for the lower tiers. The potential effect of rewarding these characteristics is to incent market participants at the margins to reconfigure their operations so as to qualify for smaller tiers than would otherwise apply. The potential for such an effect would be greater among those CAT Reporters that fall at the low end of a tier and could most easily alter their operations to qualify for a smaller tier. Similarly, the funding model could create incentives for a firm that has an activity level near the top of a tier to avoid additional market activity that might move it to a higher fee tier. For example, to control its tier level, a market participant could reduce its quoting activity or cease providing services in a set of securities. Such activity could affect liquidity and the availability of trading services to investors. The Commission notes, however, that because this incentive is contingent on being near a fee-tier cutoff point, it preliminarily believes relatively few market participants would likely be affected and thus market quality effects would likely not be significant.[1007] Furthermore, for those market participants near a cutoff point, managing activity to avoid a higher fee tier would necessarily incur costs of lost business and potential loss of market share, and would possibly be difficult to implement, which should mitigate any effects on market quality.

The Commission recognizes that the tiering of fees also could create calendar effects within markets. Although the Plan does not detail the horizon at which CAT would measure activity levels, the structure ultimately approved by the Operating Committee could affect market participant behavior near the end of a measuring period. For example, high levels of market activity during a measuring period might cause CAT Reporters to limit their activity near the end of a measurement period to avoid entering a higher fee tier. If this translates into a reduction in quoting activity, market liquidity conditions could deteriorate at the end of activity measurement periods, and improve when a new measurement period begins, for example.

The Commission notes that the Operating Committee has discretion under the Plan governance structure to make the tier adjustments discussed in Section 11.1.d for individual CAT Reporters. This provision might mitigate incentives for individual market participants to alter market activities to reduce their expected CAT fees.

d. Differential CAT Costs Across Execution Venues

The funding model proposed in the Plan is a bifurcated funding model, in which costs are first allocated between the group of all broker-dealers and the group of all Execution Venues, then within these groups by market activity level.[1008] The proposed funding model treats Execution Venues differently from broker-dealers; this differential treatment could introduce inefficiencies to the market for execution services. As discussed in a recent academic paper,[1009] differential funding models in execution venues could influence how broker-dealers route customer order flow, possibly to the detriment of execution quality realized by investors. The Commission preliminarily believes that the bifurcated funding model proposed in the Plan almost certainly results in differential CAT costs between Execution Venues because it would assess fees differently on exchanges and ATSs for two reasons. First, message traffic to and from an ATS would generate fee obligations on the broker-dealer that sponsors the ATS, while exchanges incur almost no message traffic fees.[1010] Second, broker-dealers that internalize off-exchange order flow, generating off-exchange transactions outside of ATSs, would face a differential funding model compared to ATSs and exchanges.[1011] The cost differentials that result might create incentives for broker-dealers to route order flow to minimize costs,[1012] creating a potential conflict of interest with broker-dealers' investor customers, who are likely to consider many facets of execution quality (such as price impact of a trade and probability of execution in a venue in which the order is exposed) in addition to any of these costs that are passed on to them.

In addition to friction created by the bifurcated structure of the funding model, the Commission preliminarily believes that the CAT NMS Plan funding model shifts broker-dealer costs associated with the Central Repository to all broker-dealers and away from Options Market Makers. The CAT NMS Plan provides that broker-dealers would not report their options quotations to the Central Repository, while equity market makers would report their equity quotations to the Central Repository.[1013] This differential treatment of market making quotes affects costs of funding the Central Repository in two ways. First, the elimination of Options Market Maker quotes from the message traffic of broker-dealers decreases the number of messages that must be reported and stored, which presumably reduces the overall cost of building and operating the Central Repository. This reduction in the overall cost of the Central Repository reduces costs to both broker-dealers and Execution Venues. Second, because Options Market Maker quotes would not be in the message traffic which determines the allocation of broker-dealer costs of the Central Repository, broker-dealers that do not quote listed options would pay a higher share of broker-dealer-assessed CAT fees than they would if Options Market Makers' quotes were included in the allocation of fees. Also, Options Market Makers would pay relatively lower fees than they would if their quotations were included in CAT message traffic from broker-dealers.

[1005] The CAT NMS Plan defines "Execution Venue" as ". . . a Participant or an alternative trading system ("ATS") (as defined in Rule 300 or Regulation ATS) that operates pursuant to Rule 301 of Regulation ATS (excluding any such ATS that does not execute orders)." The Plan also defines Industry Member as ". . . a member of a national securities exchange or a member of a national securities association". *See* CAT NMS Plan, *supra* note 3, at Article I, Section 1.1 for definitions. Classification of Execution Venues into tiers is based on transacted volume market share of share volume (in the case of NMS stocks and OTC Equity Securities) or contract volume (in the case of listed options). For Industry Members, classification into tiers is based on message traffic. Based on conversations with Participants, the Commission preliminarily believes message traffic would be based on CAT Reportable Events reported to the Central Repository. *See id.* at Article XI, Section 11.3 for discussion of assignment to funding tiers.

[1006] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(v).

[1007] This argument assumes that activity levels used to determine funding tiers do not naturally cluster near cutoffs, and that if such natural cutoff points exist, the Operating Committee would avoid setting such funding tier cutoff levels near those activity levels.

[1008] *See* CAT NMS Plan, *supra* note 3, at Article XI.

[1009] *See* Robert H. Battalio, Shane A. Corwin and Robert H. Jennings, Can Brokers Have It All? On the Relation between Make-Take Fees and Limit Order Execution Quality (2015 working paper), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2367462.* ("Battalio, Corwin, and Jennings").

[1010] *See* CAT NMS Plan, *supra* note 3, at Section 11.3.(b): "For the avoidance of doubt, the fixed fees payable by Industry Members pursuant to this paragraph shall, in addition to any other applicable message traffic, include message traffic generated by: (i) an ATS that does not execute orders that is sponsored by such Industry Member; and (ii) routing orders to and from any ATS sponsored by such Industry Member." The Commission notes that exchange broker-dealers would be subject to message traffic fees as Industry Members under the Plan. However, the Commission notes that based on its analysis of OATS data from September 15–19, 2014, these broker-dealers are minor contributors to overall message traffic, accounting for less than 0.03% of OATS ROEs.

[1011] *See* CAT NMS Plan, *supra* note 3, at Article XI.

[1012] This assumes that CAT fees would ultimately be borne by the broker-dealers that make routing decisions. Currently, exchange access fees are often borne by broker-dealers that make routing decisions, as discussed in Battalio, Corwin, and Jennings. *Id.* If Execution Venues were to absorb these fees rather than pass them on to customers, broker-dealer routing decisions might not be affected. It is also possible that some Execution Venues could incorporate some sort of rebate for broker-dealer message fees into their fee schedules, effectively making some venues less expensive for broker-dealers to access.

Although this differential treatment would marginally increase the cost of providing other broker-dealers services relative to options market making, the Commission preliminarily does not believe that this would materially affect a market participant's willingness to provide broker-dealer services other than options market making for several reasons. First, many market participants participate in both equities and options markets because activity in one market (equities or options) could be used to hedge positions acquired in the other market. Consequently, many firms already find it cost effective to participate in both markets. Second, broker-dealers participating in equity markets have significant infrastructure in place for serving that market and switching costs to participate in options market making are high due to the need to establish quantitative infrastructure to quote options, market connectivity, IT infrastructure, and clearing/settlement arrangements required to transact in options; consequently, reducing the cost to make markets in options is unlikely to attract broker-dealers to change their business models. Finally, the Commission believes that the market to provide liquidity in the options market is already a competitive one because many broker-dealers participate in that market and market share that is sufficient to cover substantial fixed costs of making markets in options is valuable; consequently, options market participants have incentives to compete to win market share. Without a market change that significantly affects profits to be made in options market making, it seems broker-dealers would need a competitive advantage relative to existing competitors to successfully win market share from the existing competitors. The Commission preliminarily believes that that broker-dealers that currently focus on equity market making and other broker-dealer services unrelated to options market making are likely to continue to focus on the markets in which they participate because their competitive advantages relate to these activities.

5. Request for Comment on the Costs

The Commission requests comment on all aspects of the discussion of the potential costs of the CAT NMS Plan. In particular, the Commission seeks responses to the following questions:

301. Do Commenters agree with the Commission's assessment of the potential costs of the CAT NMS Plan? Why or why not?

302. To what extent do the uncertainties related to future decisions about Plan implementation impact the assessment of potential costs of the Plan? Please explain.

303. Do Commenters agree that the Plan's level of detail regarding the drivers of the costs to build, operate, and maintain the Central Repository is sufficient to assess the economic effects of the Plan? If more detail is needed, how can this information be obtained?

304. Do Commenters agree that using the cost estimates provided in Bids from the Shortlisted Bidders provides reasonable estimates of costs to build and operate the Central Repository? Why or why not?

305. Estimates in the Plan suggest that the Participants' data reporting costs will significantly increase while surveillance costs will significantly decrease if the Plan is approved. Do Commenters agree that these changes are likely to occur? Please explain.

306. Do Commenters agree with the Commission's characterization of the limitations in the cost studies? Do Commenters agree with the Commission's assessment that the Vendors Study and Participants Study have reliable cost estimates? Do Commenters agree that cost estimates for large OATS Reporters and large non-OATS Reporters are reliable? Do Commenters agree that cost estimates for small reporters are unreliable? Why or why not? Do Commenters have more precise estimates of the costs than provided in the cost surveys?

307. The Commission re-estimated aggregated costs under a different set of assumptions than the Plan. Do Commenters agree that the re-estimated costs better represent the expected costs of the CAT NMS Plan? Why or why not? Do Commenters agree that most broker-dealers that report fewer than 350,000 OATS ROEs per month are likely to report this data through a service bureau?

308. Do Commenters agree with the estimates of annual service bureau costs for a very small OATS-reporting firm of $50,000 to $180,000 per year, which assumes that the service bureau provides order routing and an order-handling system? If not, please provide alternate estimates.

309. Do Commenters agree that the pricing function for service bureaus is concave (increasing at a decreasing rate)? Why or why not? The Commission assumes in its re-estimation that service bureau cost functions are approximately as concave as exchange pricing functions. Do Commenters agree? Why or why not?

310. Will the requirement to provide customer information to the Central Repository be a significant cost-driver for Outsourcers? Why or why not? Is the need for encryption of this data a significant cost-driver?

311. Will the anticipated retirement of duplicative reporting systems such as EBS affect Outsourcer costs? Why or why not? Will the reduction in ad hoc data requests significantly affect the costs incurred by service bureaus in assisting their clients in responding to these requests? Why or why not?

312. Are there ways in which the Commission could better estimate the aggregate costs of the CAT NMS Plan? If so, please explain.

313. Do Commenters agree with the Commission's assumption that most firms that report fewer than 350,000 OATS ROEs per month are self-clearing? If not, please explain. Do Commenters believe that these firms would have significantly higher implementation costs due to their need to provide this information to any service bureaus they use for regulatory data reporting?

314. Do Commenters agree that broker-dealers that are exempt or excluded from OATS reporting are likely to be small and should have their costs estimated as Outsourcers? If no, how many of these broker-dealers currently participate in more than 350,000 events that would be OATS-reportable, were they not exempt or excluded, per month?

[1013] *See* Section IV.H.1.a, *supra* for a discussion of an alternative that would require Options Market Makers to report their quotes.

315. Are Commenters aware of options market making firms that are FINRA members and report fewer than 350,000 OATS ROEs per month, or that are exempt or excluded from OATS reporting rules? If so, are there ways that the Commission can identify these firms to better estimate their costs under the Plan?

316. Are Commenters aware of ELPs that are not CBOE members that did not trade on ATSs in 2014? If so, are there ways that the Commission can identify these firms to better estimate their costs under the Plan?

317. Do Commenters agree that FINRA member broker-dealers that are Options Market Makers are unlikely to be exempt or excluded from OATS-reporting requirements, and are likely to report more than 350,000 OATS ROEs per month? If not, how many FINRA member Options Market Makers exist that are exempt or excluded from OATS reporting requirements, or that report fewer than 350,000 OATS ROEs per month? Are there methods by which the Commission could improve its estimates of costs these broker-dealers are likely to face if the Plan is approved?

318. According to survey results, Approach 1 aggregate implementation and ongoing costs are higher than those for Approach 2 for CAT Reporters, though not statistically so.[1014] The Commission notes that this cost estimate does not seem intuitive because Approach 2 could result in extra data processing by CAT Reporters to translate data into a fixed format whereas Approach 1 would require no translation. Why is the cost of Approach 1 anticipated to be higher than Approach 2? Can this be explained by the use of service bureaus whom CAT Reporters expect to charge the same for either approach? Can this be explained by the need to process data under either approach to replace ticker symbols with listing exchange symbology?

319. Do Commenters believe that duplicative reporting systems will be retired and, if so, when? What systems do Commenters expect to be retired?[1015] Are there any systems that cannot be retired? What are the costs associated with retiring duplicative reporting systems? What are the benefits of retiring duplicative reporting systems? Would there be cost savings as a result of retiring any duplicative reporting systems? How does the timeline for retiring duplicative reporting systems affect the costs and benefits? Please explain.

320. Do service bureaus handle EBS reporting for their clients? To what extent would EBS reporting contribute to duplicative reporting costs or system retirement costs and savings?

321. The Commission's analysis discusses the Plan's timetable for retirement of duplicative reporting systems (*i.e.*, a maximum of 2.5 years). Is the timetable for retirement of these systems in the Plan realistic and/or reasonable? Are there ways that the timetable for duplicative reporting system retirement could be accelerated? If so, how?

322. Do Commenters believe that the period of duplicative reporting that would precede the retirement of certain current, anticipated to be retired, regulatory reporting systems would impose significant cost burdens on industry? Are the Commission's estimates of those costs accurate? Are there dimensions of these costs that the Commission has not recognized? If so, what are they and what are their magnitudes?

323. What milestones should CAT be required to reach before duplicative reporting systems can be retired?

324. What costs would service bureaus face in accomplishing a period of duplicative reporting during which both CAT and the regulatory data reporting systems that the Plan anticipates would be retired are operational? How many FTEs would be involved?

325. What costs would broker-dealers face in accomplishing a period of duplicative reporting during which both CAT and the regulatory data reporting systems that the Plan anticipates would be retired are operational? How many FTEs would be involved?

326. The CAT NMS Plan estimates that market participants would face significant costs of approximately $2.6 billion in connection with retiring duplicative reporting systems. What expenses does this estimate cover, and which systems account for which costs? For some broker-dealers, would implementation of CAT reporting accomplish the retirement of other regulatory data reporting systems? How do system retirement costs differ between broker-dealers that outsource their data reporting versus those who perform this function in-house?

327. Do Commenters believe that the CAT NMS Plan would deliver additional cost savings from sources other than the retirement of duplicative reporting systems and a reduction in the amount of ad-hoc data requests to regulated entities? Are there any changes to the CAT NMS Plan that would increase the potential cost savings?

328. Are SROs adequately incentivized to retire current regulatory reporting and surveillance systems that might be replaced by CAT? Do they have incentives to resist the retirement of these systems that this analysis fails to identify?

329. Do Commenters agree that costs associated with the Plan incurred by broker-dealers could be passed down to their customers? Why or why not? If so, do Commenters have estimates regarding what fraction of broker-dealer costs would be passed down?

330. The Commission preliminarily believes that the Vendors Study measures ongoing costs that would also be captured by the third-party outsourcing costs in the other surveys. As a result, the Commission does not add these to the aggregated cost estimates. Do Commenters agree with this approach? Is there any double counting of costs across the surveys, or can the individual survey estimates be aggregated into an industry-wide estimate? Please explain.

331. According to survey results, Approach 1 aggregate implementation costs are higher than those for Approach 2 for vendors and ongoing costs are lower.[1016] The Commission notes that this implementation cost result does not seem intuitive because Approach 2 could result in creating a whole new data translation process to implement the Plan whereas Approach 1 would require no translation. Why is Approach 1 costlier for vendors to implement than Approach 2? Can this be explained by the need to process data under either approach to replace ticker symbols with listing exchange symbology?

332. The Commission assumes that cost estimates from Participants include all costs the Participants would incur if the Plan is approved, and that other costs related to development of the Plan are not avoidable if the Plan is not approved. Is it reasonable for the Commission to treat all costs related to development of the Plan that are not included in implementation and ongoing costs as sunk costs? Why or why not?

333. To what degree would industry's costs to implement and maintain CAT reporting be passed on to investors? Would competition between broker-dealers affect the passing on of costs to investors? Why or why not?

334. How significant to the total industry costs of the CAT NMS Plan are

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[1014] Approach 1 assumes CAT Reporters would submit CAT Data using their choice of industry protocols. Approach 2 assumes CAT Reporters would submit data using a pre-specified format.

[1015] *See supra* note 856.

[1016] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(iv)(A).

clock synchronization requirements, the requirement that Options Market Makers send quote times to the exchanges, the requirement that the Central Repository maintain six years of CAT Data, and the inclusion of OTC Equity Securities in the initial phase of the implementation of the CAT NMS Plan? Why?

335. How significant to the total industry costs of the CAT NMS Plan is the requirement to report customer information to the Central Repository? What elements of this requirement contribute to its significance of the potential costs of the Plan? Are there ways in which this data can be made available to regulators that would prove less costly to industry and investors? If so, what are they?

336. How significant to the total industry costs of the CAT NMS Plan is the requirement to report certain information as part of the material terms of the order? What elements of this requirement contribute to its significance of the potential costs of the Plan? Are there ways in which this data can be made available to regulators that would prove less costly to industry and investors? If so, what are they?

337. How significant to the total industry costs of the CAT NMS Plan is the requirement to report information to the Central Repository using listing exchange symbology? What elements of this requirement contribute to its significance of the potential costs of the Plan? Are there ways in which this data can be made available to regulators that would prove less costly to industry and investors? If so, what are they?

338. How significant to the total industry costs of the CAT NMS Plan is the requirement to report allocation information to the Central Repository? What elements of this requirement contribute to its significance of the potential costs of the Plan? Are there ways in which this data can be made available to regulators that would prove less costly to industry and investors? If so, what are they?

339. Are there other requirements of the CAT NMS Plan that would be significant sources of costs? If so, what are they? Are there ways in which those requirements could be made less costly? If so, what are they?

340. Do Commenters agree that ancillary fees levied by the Plan Processor on broker-dealers in response to late or inaccurate reporting are unlikely to broadly levied on broker-dealers? Do Commenters believe they would comprise a significant source of CAT costs to industry? Why or why not?

341. Do Commenters agree with the Commission's analysis of potential cost savings from a reduction in the number (and ultimately the cost) of data requests as a result of regulators having direct access to CAT Data?

342. Do Commenters agree with the Commission's analysis of the risk of a security breach? Do Commenters agree with the Commission's analysis of the potential costs of a security breach? Are there factors not covered in the analysis? What are they? Are the security measures outlined in the Plan appropriate and reasonable? Why or why not?

343. Do Commenters agree with the Commission's analysis of potential changes to CAT reporter behavior? Why or why not? Are there additional factors that should be considered?

344. Do Commenters agree with the Commission's analysis of the Plan's funding model? Why or why not? Are there additional factors that should be considered?

345. Do Commenters agree with the Commission's analysis of potential costs resulting from differential CAT costs across Execution Venues? Why or why not? Are there additional factors that should be considered?

346. Should the Plan require the inclusion of a web-based manual data entry option for initial CAT reporting in addition to updates and corrections? Please explain. How would a web-based manual data entry option affect the costs incurred by CAT Reporters? Do any current regulatory data reporting systems have a web-based manual data entry option? If so, which ones and how often do broker-dealers utilize that option for data submission?

G. Efficiency, Competition, and Capital Formation

In determining whether to approve the CAT NMS Plan, and whether the Plan is in the public interest, Rule 613 requires the Commission to consider the impact of the Plan on efficiency, competition and capital formation.[1017]

The Commission preliminarily believes that the Plan generally promotes competition. However, as explained below, the Commission recognizes that the Plan could increase barriers to entry because of the costs to comply with the Plan. Further, the Commission's analysis identifies several limitations to competition, but the Plan contains provisions to address some limitations and Commission oversight can also address the limitations.

The Commission preliminarily believes that the Plan would improve the efficiency of regulatory activities and enhance market efficiency by deterring violative activity that harms market efficiency. The Commission preliminarily believes that the Plan would have modest positive effects on capital formation and that the threat of a security breach at the Central Repository is unlikely to significantly harm capital formation.

The Commission notes that the significant uncertainties discussed earlier in this economic analysis also affect the Commission's analysis of efficiency, competition, and capital formation. For example, the Commission recognizes that the uncertainties around the improvements to data qualities can affect the strength of the Commission's conclusions on efficiency, and the uncertainty regarding how the Operating Committee allocates the fees used to fund the Central Repository could affect the Commission's conclusions on competition. Additionally, the Commission recognizes that the Plan's likely effects on competition, efficiency and capital formation are dependent to some extent on the performance and decisions of the Plan Processor and the Operating Committee in implementing the Plan, and thus there is necessarily some further uncertainty in the Commission's analysis. Nonetheless, the Commission believes that the Plan contains certain governance provisions, as well as provisions relating to the selection and removal of the Plan Processor, that mitigate this uncertainty by promoting decision-making that could, on balance, have positive effects on competition, efficiency, and capital formation.

1. Competition

As required by Rule 613, the Plan contains an analysis of its expected impact on competition.[1018] The Plan's analysis considers potential impacts of the CAT NMS Plan on competition related to technology, cost allocation across CAT Reporters, and changes in regulatory reporting requirements.[1019] The Plan splits its analysis between "Participants and broker-dealers communities" and concludes that the Plan generally would avoid placing an inappropriate burden on competition in U.S. markets.[1020] The Plan's analysis states the criteria for evaluating impacts on competition by outlining the channel of potential impacts as policy changes caused by the Plan that "burden a group or class of CAT Reporters in a way that would harm the public's ability to access their services" and states that such impacts "should be measured relative to the economic baseline." [1021]

[1017] *See* 17 CFR 242.613(a)(5); *see also* 15 U.S.C. 78c(f).

[1018] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8 (noting that Rule 613(a)(1)(viii) requires the Plan to include a discussion of an analysis of the impact of the Plan on competition, efficiency and capital formation).

[1019] *See id.*

[1020] *See id.*

The Commission's evaluation of competition reorients the Plan's approach to analyzing competition, expands upon it, and notes some limitations in the scope and conclusions of the Plan's analysis. In particular, the Commission's analysis of competition is organized and segmented by the particular markets in which competition among service providers of types of services exists. The Commission's analysis focuses on four distinct markets: The market for trading services, the markets for broker-dealer services, the market for regulatory services, and the market for data reporting services. In the context of the Plan, this allows the competition analysis to consider a more complex interaction between all market participants in a defined market than would be feasible by focusing solely on market participant types. This approach allows the Commission to determine whether a differential impact across competitors affects overall competition in the market. Much like the Plan's criteria for evaluation, the Commission recognizes that any effects on competition, with respect to each market, should be compared to a Baseline that characterizes the competitive environment without the CAT NMS Plan. In addition, the Commission considered uncertainty in the effect of the Plan on competition in any of these markets.

After analyzing the discussion of competition and the other relevant provisions of the Plan in the context of four affected markets, the Commission preliminarily believes that, while there could be effects on individual competitors, these effects would not lead to changes to competition as a whole in affected markets in a way that would generate significant adverse effects. In sum, and as discussed in detail below, the Commission preliminarily believes that the Plan poses a risk for competition for trading services, but provisions in the Plan and Commission oversight could mitigate this risk. Additionally, the Plan could have a differential impact on the ability of smaller broker-dealers and broker-dealers subject to CAT reporting to compete in the various markets for broker-dealer services, but these differential impacts may not be significant enough to affect overall competition in the markets for broker-dealer services. Moreover, the Plan generally promotes competition to be the Plan Processor and competition for regulatory services, but friction in those markets could limit the competition. Finally, the Plan could have a harmful effect on competition in the market for data reporting services, at least in the short term, because of capacity constraints, but the prolonged implementation for small broker-dealers could limit these harmful effects.

a. Market for Trading Services

The Commission analyzed the CAT NMS Plan's economic effects on competition in the market for trading services, compared to the Baseline of the competitive environment without the Plan, and preliminarily believes that the Plan would not place a significant burden on competition for trading services. The Commission recognizes the risk for the Plan to have negative effects on competition and to increase the barriers to entry in this market, but preliminarily believes that Plan provisions and Commission oversight could mitigate these risks.

The market for trading services, which is served by exchanges, ATSs, and liquidity providers (internalizers and others), relies on competition to supply investors with execution services at efficient prices. These trading venues, which compete to match traders with counterparties, provide a framework for price negotiation and disseminate trading information. The market for trading services in options and equities consists of 19 national securities exchanges, which are all Plan Participants,[1022] and off-exchange trading venues including broker-dealer internalizers, which execute substantial volumes of transactions, and 44 ATSs, which are not Plan Participants.[1023] Since the adoption of Regulation NMS in 2005, the market for trading services has become more fragmented and competitive, and there has been a shift in the market share of trading volume among trading venues. For instance, from 2005 to 2013, there was a decline in the market share of trading volume for exchange-listed stocks on NYSE. At the same time, there was an increase in the market share of newer national securities exchanges such as NYSE Arca, BATS–Z, BATS–Y, EDGA and EDGX.[1024] During the same time period, the proportion of NMS Stocks trading off-exchange (which includes both internalization and ATS trading) increased; for example, during the second quarter of 2015, NMS Stock ATSs alone comprised approximately 15 percent of consolidated volume, and other off-exchange volume totaled 18 percent of consolidated volume over the same period.[1025] Aside from trading venues, exchange market makers provide trading services in the securities market. These firms stand ready to buy and sell a security "on a regular and continuous basis at publicly quoted prices." [1026] Exchange market makers quote both buy and sell prices in a security held in inventory, for their own account, for the business purpose of generating a profit from trading with a spread between the sell and buy prices. Off-exchange market makers also stand ready to buy and sell out of their own inventory, but they do not quote buy and sell prices.[1027]

The Plan examined the effect of the CAT NMS Plan on the market for trading services primarily from the perspective of the exchanges. The Plan asserts that distribution of regulatory costs incurred by the Plan would be distributed according to "the Plan's funding principles," calibrated to avoid placing "undue burden on exchanges relative to their core characteristics," and would thus not cause any exchange to be at a relative "competitive disadvantage in a way that would materially impact the respective Execution Venue marketplaces." [1028] Likewise, the Plan asserts that its method of cost allocation would avoid discouraging entry into the Participant community because a potential entrant, like an ATS, would "be assessed exactly the same amount [of allocated CAT-related fees] for a given level of activity" both before and after becoming an exchange.[1029]

[1021] *See id.*

[1022] The Commission understands that ISE Mercury, LLC will become a Participant in the CAT NMS Plan and thus is accounted for as a Participant for purposes of this Notice. *See supra* note 3.

[1023] *See* Concept Release on Equity Market Structure, at 3598–3560, *supra* note 733 (for a discussion of the types of trading centers); *see also* Alternative Trading Systems with Form ATS on File with the SEC as of April 1, 2016, *available at https://www.sec.gov/foia/ats/atslist0416.pdf.*

[1024] *See* Securities Exchange Act Release No. 76474 at 81112, "Regulation of NMS Stock Alternative Trading Systems", *available at http://www.sec.gov/rules/proposed/2015/34-76474.pdf.*

[1025] *See id.* at 81124.

[1026] *See* "Market Maker", *available at http://www.sec.gov/answers/mktmaker.htm* (last visited April 18, 2016).

[1027] Laura Tuttle, OTC Trading: Description of Non-ATS OTC Trading in National Market System Stocks (March 2014), *available at http://www.sec.gov/dera/staff-papers/white-papers/otc-trading-white-paper-03-2014.pdf.*

[1028] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(a)(i); *see also id.* at Section 11.2 (for a discussion of the Plan's funding principles); Section, III.A.3.d, *supra.*

[1029] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(a)(i).

The Commission also examined the effect of the funding model on competition in the market for trading services, including off-exchange liquidity suppliers and ATSs. In addition, the Commission considered the effect of implementation and ongoing costs of the Plan, whether particular elements of the Plan could hinder competition, and the effect of enhanced surveillance on competition in the market for trading services.

(1) The Funding Model

As noted above, the Operating Committee would fund the Central Repository by allocating its costs across exchanges, FINRA, ATSs and broker-dealers.[1030] The Operating Committee would decide which proportion of costs would be funded by exchanges, FINRA, and ATSs and which portion would be funded by broker-dealers. The Plan does not specify how the Operating Committee would select this allocation. However, the portion allocated to the exchanges, FINRA, and ATSs would be divided among them according to market share of share volume and the portion allocated to broker-dealers would be divided among them according to message traffic, including message traffic sent to and from an ATS.[1031] The Operating Committee would allocate fees for the equities market and options market separately based on market share in each market. The Operating Committee would file the fees resulting from its funding model with the Commission under the Exchange Act.

Any entity that becomes a new exchange would be required to join the CAT NMS Plan as a Participant. In addition, any new Participant to the Plan must pay a "Participation Fee," to the Company "in an amount determined by a Majority Vote of the Operating Committee as fairly and reasonably compensating the Company and the Participants for costs incurred in creating, implementing, and maintaining the CAT."[1032] This Participation Fee would be based on, among other potential factors, capital expenditures paid by the Company amortized over five years, costs incurred by the Company to accommodate the new Participant, and Participant Fees paid by other new Participants.[1033]

The Commission preliminarily believes that any impacts of such fees on competition in the market for trading services would manifest either through the model for the fees itself or through the later allocation of the fees across market participant types, across equity or options exchanges or, within market participant types and markets, through the levels of fees paid by each tier. Each of the different channels through which the Plan could have an adverse effect on competition is discussed separately below.

A. Funding Model

As discussed in Section IV.F.4.d, the Commission preliminarily believes that the structure of the funding model could provide a competitive advantage to exchanges over ATSs. The Plan states that an entity would be assessed exactly the same amount for a given level of activity whether it acted as an ATS or an exchange.[1034] However, FINRA would be charged fees based on the market share of off-exchange trading. ATSs, which are FINRA members, would presumably pay a portion of the FINRA fee through their broker-dealer membership fees. In addition, ATSs would pay a fee for their market share, which is a portion of the total off-exchange market share. Therefore, ATS volume would effectively be charged once to the broker-dealer operating the ATS and a second time to FINRA.[1035] This would result in ATSs paying more than exchanges for the same level of activity. Ultimately, if the funding model disadvantages ATSs relative to registered exchanges, trading volume could migrate to exchanges in response, and ATSs could have incentives to register as exchanges as well.[1036]

Additionally, the Commission preliminarily believes that the Participation Fee could discourage new entrants or the registration of an ATS as an exchange, increasing the barriers to entry to becoming an exchange. In particular, the factors listed in the Plan for determining the Participation Fee consider the previous costs incurred by the existing Participants but not the costs already incurred by the new Participant when it acted as an ATS.[1037] However, the Plan does not prescribe a set formula for determining the Participation Fee and the Plan does not preclude considering previous costs incurred by the ATS in the Participation Fee. In addition, although amendments designated by sponsors to an NMS plan as establishing or changing a fee may be effective upon filing with the Commission,[1038] the Commission may summarily abrogate the amendment that establishes (or in the future, changes) the Participation Fee within 60 days of its filing and require that the fee amendment be refiled in accordance with Rule 608(a)(1) and reviewed in accordance with Rule 608(b)(2) of Regulation NMS, if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanisms of, a national market system or otherwise in furtherance of the purposes of the Act.[1039]

Further, because the funding model seems to charge ATSs more for their market share than exchanges, ATSs could pay relatively less for their market share as an exchange than as an ATS, countering this barrier to entry depending on the magnitudes of the two fee types.

B. Allocation of Fees

The Plan discusses the allocation of fees among market participants of different sizes within the same market participant type (Execution Venues versus broker-dealers), but does not

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[1030] *See id.* at Article XI.

[1031] *Id.*

[1032] *See id.* at Section 3.3. The Commission notes that the Plan does not specify the Participation Fee. The Commission expects this fee to be filed as an amendment to the CAT NMS Plan under Rule 608 of Regulation NMS. *See* 17 CFR 242.608.

[1033] The Commission notes that Section 3.3(b)(v) of the CAT NMS Plan states, "In the event the Company (following the vote of the Operating Committee contemplated by Section 3.3(a)) and a prospective Participant do not agree on the amount of the Participation Fee, such amount shall be subject to review by the Commission pursuant to § 11A(b)(5) of the Exchange Act." *See* CAT NMS Plan, *supra* note 3, at Section 3.3(b)(v); *see also* text accompanying notes 1038–1039, *infra*.

[1034] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(iii)(C).

[1035] *Id.* at Section 11.3(b).

[1036] The Commission notes that ATSs currently incur a different set of regulatory fees than are incurred by exchanges, because ATSs are required to be members of a national securities association. FINRA charges its members fees to cover its regulatory costs. *See* FINRA Manual: Corporate Organization: By-Laws of the Corporation: Schedule A: Section 1—Member Regulatory Fees, *available at http://finra.complinet.com/en/display/display_main.html?rbid=2403&element_id=4694* ("FINRA shall, in accordance with this Section, collect member regulatory fees that are designed to recover the costs to FINRA of the supervision and regulation of members, including performing examinations, financial monitoring, and policy, rulemaking, interpretive, and enforcement activities.").

[1037] *See* CAT NMS Plan, *supra* note 3, at Section 3.3(b).

[1038] *See* 17 CFR 242.608(b)(3)(i).

[1039] *See* 17 CFR 242.608(a)(1); 608(b)(2); 608(b)(3)(i); and 608(b)(3)(iii). Pursuant to Rule 608(b)(2) of Regulation NMS, the Commission shall approve such amendment, with such changes or subject to such conditions as the Commission may deem necessary or appropriate, if it finds that such amendment is necessary or appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanisms of, a national market system, or otherwise in furtherance of the purposes of the Act. Approval of the amendment shall be by Commission order.

discuss the allocation of fees across the different market participant types or markets. The Operating Committee would determine this allocation and would submit a filing to the Commission, which would be subject to Commission review and public comment.[1040] The Commission recognizes the potential for the Operating Committee to influence the market for trading services either by coordinating to favor one segment over another, or through an imbalance in the voting rights on the Operating Committee. The Commission also preliminarily believes that the Plan contains governance provisions that could mitigate such potential burdens on competition.

The Commission recognizes that the potential for a burden on competition and effects on competitors in the market for trading services could arise from provisions relating to the allocation and exercise of voting rights. In particular, a concentration of influence over Committee decisions could directly and indirectly affect competition. The potential for concentration of influence over vote outcomes arises from proposed provisions to give one vote to each Plan Participant[1041] in an environment where some Participants are Affiliated SROs.[1042] Indeed, supermajority approval could be achieved through five of the 10 groups of Affiliated SROs and majority approval could be achieved with just four such groups.[1043] In light of this potential for concentration, voters could weigh some particular interests more than others. For example, the Participant groups with options exchanges could have the incentive to allocate a disproportionately low level of fees for options market share than for equity market share. Such an allocation could disadvantage competing Participants with only equities exchanges.

The inclusion of all exchanges on the Operating Committee could give the Plan Participants opportunities and incentives to share information and coordinate strategies in ways that could reduce the competition among exchanges or could create a competitive advantage of exchange trading over off-exchange trading.[1044] However, the Commission preliminarily believes that the Plan would limit these potential burdens on competition. In particular, the Plan includes provisions designed to limit the flow of information between the employees of the Plan Participants who serve as members of the Operating Committee and other employees of the Plan Participants.[1045] Additionally, the Plan includes provisions that guide the Operating Committee to set fees between exchanges and ATSs in a tiered fashion, based upon market share.[1046] Finally, Commission oversight could also mitigate any concerns that burdens on competition might arise as a result of this approach.

Additionally, the Commission agrees with the Plan's assessment that some governance features of the Plan would limit adverse effects on competition in the market for trading services. The governance structure of the Plan contains provisions to limit the incentive and ability of Operating Committee members to serve the private interests of their employers, such as rules regulating conflicts of interest.[1047] Such governance provisions could mitigate the potential for members of the Operating Committee to use their influence over the fee schedule to benefit their own enterprise in a way that unfairly harms the customers of competing exchanges and ATSs and places a burden on competition. Moreover, as discussed above, the Commission may summarily abrogate and require the filing of Plan amendments that establish or change a fee in accordance with Rule 608(a)(1) and review such amendments in accordance with Rule 608(b)(2) of Regulation NMS, if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanisms of, a national market system or otherwise in furtherance of the purposes of the Act.[1048] In such a case, if the Commission chooses to approve such amendment, it would be by order and, with such changes or subject to such conditions as the Commission may deem necessary or appropriate.

(2) Costs of Compliance

Because all Participants but one compete in the market for trading services, the ability of affiliates to vote as a group could in principle allow a few large Participant groups to influence the outcome of competition in the market for trading services by making various decisions that can alter the costs of one set of competitors more than another set. Further, the Plan would allocate profits and losses from operating the Central Repository equally across Participants, which could advantage small exchanges in the event of a profit and disadvantage small exchanges in the event of a loss. This could negatively impact competition if the cost differentials are unnecessary in light of the cost-benefit trade-offs of alternatives and if the cost differentials are significant enough to alter the set of services that some Participants offer.

Generally, smaller competitors could have implementation and ongoing costs of compliance that are disproportionate relative to their size. Any choices that could exacerbate these differences could potentially result in the exit of smaller competitors. To lessen the impact of funding the Central Repository on smaller exchanges and ATSs, the Plan would apply a tiered funding model that charges the smallest exchanges and ATSs the lowest fees. Likewise, the Plan would apply a tiered funding model that would charge the smallest broker-dealers, including liquidity suppliers, the lowest fees. However, the Commission notes that the Plan does not indicate whether off-exchange liquidity providers would pay fees similar to similarly-sized ATSs and exchanges.

[1040] *See supra* notes 78 and 79 (describing how fee schedules for CAT could be filed and noting that they could take effect upon filing with the Commission).

[1041] *See* CAT NMS Plan, *supra* note 3, at Section 4.3.

[1042] The CAT NMS Plan states that the Operating Committee shall consist of one voting member representing each Participant and that one individual may serve as the voting member of the Operating Committee for multiple Affiliated Participants and shall have the right to vote on behalf of each such Affiliated Participant. *See id.* at Section 4.2(a).

[1043] The twenty SROs that are Participants in the CAT NMS Plan include five sets of affiliated SROs (New York Stock Exchange LLC, NYSE Arca, Inc., and NYSE MKT LLC (the "NYSE Group"); The NASDAQ Stock Market LLC, NASDAQ OMX BX, Inc., and NASDAQ OMX PHLX LLC (the "NASDAQ Group"); BATS Exchange, Inc., BATS Y-Exchange, Inc., EDGX Exchange, Inc., and EDGA Exchange, Inc. (the "BATS Group"); Chicago Board Options Exchange, Incorporated and C2 Options Exchange, Incorporated (the "Chicago Options Group"); International Securities Exchange, LLC, ISE Gemini, LLC, and ISE Mercury, LLC (the "ISE Group"); and five independent SROs (National Stock Exchange, Inc.; Chicago Stock Exchange, Inc.; BOX Options Exchange LLC; Miami International Securities Exchange LLC; and Financial Industry Regulatory Authority, Inc.). The BATS Group has four votes, the NYSE Group, the NASDAQ Group and the ISE Group each have three votes, and the Chicago Options Group has two votes. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.11(b) (Affiliated Participant Groups and Participants without Affiliations). A majority approval requires eleven votes. This could include as few as four of the SROs and sets of affiliated SROs: the affiliated SROs that have four votes, two sets of affiliated SROs that have three votes, and one other SRO or set of affiliated SROs. Supermajority approval requires fourteen votes. This could include as few as five SROs and sets of affiliated SROs: the affiliated SROs that have four votes, three sets of affiliated SROs with three votes, and any additional SRO. Note also that as few as two sets of affiliated SROs could block a Supermajority approval by casting seven "no" votes: the affiliated SROs with four votes and any one of the affiliated SROs with three votes.

[1044] *See infra* note 1272. The Commission notes that FINRA could represent the perspectives of the off-exchange portion of the market, but FINRA would have only one vote and exchanges would have nineteen.

[1045] *See* CAT NMS Plan, *supra* note 3, at Section 9.6(a) (Participants may share Plan information with their employees and other Representatives on a need-to-know basis; their use of Plan information is restricted to what is needed to achieve plan regulatory objectives). Details on the implementation of these confidentiality provisions are not stated. However, *see also id.* at Section 9.6(c) (Participants may share information among themselves without Operating Committee approval in some instances).

[1046] *See id.* at Section 11.3; Appendix C, Section B.7(b)(iv)(C).

[1047] *See supra* note 796.

[1048] *See supra* note 1039.

In addition, as noted above, the Plan provides that the Technical Specifications would not be finalized until after the selection of a Plan Processor, which would not occur until after any decision by the Commission to approve the Plan.[1049] The Commission recognizes that the costs of compliance associated with future technical choices or the selection of the Plan Processor could exacerbate the relative cost differential across competitors. For example, the Affiliated Participants on the Selection Committee could favor a Plan Processor that employs technology that would make implementation costs relatively higher for the exchanges that do not have affiliates. In addition, the Affiliated Participants, who have more votes on the Operating Committee, could be amenable to adding particular CAT Data items in the future that could expose violations on other exchanges, but not be amenable to CAT Data items that could expose violations on their own exchanges. While those groups could still use such data to surveil their own exchanges, if not in CAT Data, the data items would not be available for cross-market surveillance or efficient Commission examinations and enforcement. As such, the independent exchanges, which have only one vote on the Operating Committee, could face higher regulatory costs than exchanges of the Affiliated Participants. However, for the same reasons as stated above, the Commission preliminarily believes that the governance provisions of the Plan and Commission oversight could help to mitigate such effects on these competitors in the market for trading services.

(3) Enhanced Surveillance and Deterrence

The Commission also preliminarily believes that the CAT NMS Plan could promote competition in the market for trading services through enhanced surveillance and the deterrence of violative behavior that could inhibit competition.[1050] Should the Plan deter violative behavior, passive liquidity suppliers, such as on or off-exchange market makers could increase profits as a result of reduced losses from others' violative behavior. This increase in profits could encourage new entrants or could spark greater competition, which reduces transaction costs for investors. For example, spoofing, which involves building up the apparent depth of the market to trigger particular trading patterns and then trading against those patterns, could cause confusion about bona-fide supply and demand for a particular security. Liquidity providers could compete less than is optimal to provide liquidity in that security out of fear that they could suffer a decline in profitability if they trade at inopportune times as a result of others' spoofing behavior. If the Plan facilitates surveillance improvements that deter spoofing, it could increase incentives to provide liquidity and promote lower transaction costs for investors, particularly in stocks that may lack a critical mass of competing liquidity providers or that could be targets for violative trading behavior.

b. Market for Broker-Dealer Services

The Commission analyzed the effect of the CAT NMS Plan on the market for broker-dealer services. For simplification, the Commission presents its analysis as if the market for broker-dealer services encompasses one broad market with multiple segments even though, in terms of competition, it actually may be more realistic to think of it as numerous inter-related markets. The market for broker-dealer services covers many different markets for a variety of services, including, but not limited to, managing orders for customers and routing them to various trading venues, holding customer funds and securities, handling clearance and settlement of trades, intermediating between customers and carrying/clearing brokers, dealing in government bonds, private placements of securities, and effecting transactions in mutual funds that involve transferring funds directly to the issuer. Some broker-dealers may specialize in just one narrowly defined service, while others may provide a wide variety of services.

The market for broker-dealer services relies on competition among broker-dealers to provide the services listed above to their customers at efficient levels of quality and quantity. The broker-dealer industry is highly competitive, with most business concentrated among a small set of large broker-dealers and thousands of small broker-dealers competing for niche or regional segments of the market. To limit costs and make business more viable, small broker-dealers often contract with larger broker-dealers or service bureaus to handle certain functions, such as clearing and execution, or to update their technology.[1051] Large broker-dealers typically enjoy economies of scale over small broker-dealers and compete with each other to service the smaller broker-dealers, who are both their competitors and their customers.

There are approximately 1,800 broker-dealers likely to be CAT Reporters, while approximately 2,338 broker-dealers would not be CAT Reporters because their businesses do not involve reportable events in securities covered by the Plan.[1052] Further, broker-dealers that are anticipated to have CAT reporting obligations could compete with the broker-dealers that would not have CAT reporting responsibilities in various broker-dealer market segments that are unrelated to CAT reporting. Some broker-dealers may offer specialized services in one line of business mentioned above, while other broker-dealers may offer diversified services across many different lines of businesses. As such, the competitive dynamics within each of these specific lines of business for broker-dealers is different, depending on the number of broker-dealers that operate in the given segment and the market share that the broker-dealers occupy.

The Commission preliminarily believes costs of compliance incurred by broker-dealers to comply with the Plan, particularly to report order events to the Central Repository, will differ substantially between broker-dealers and may affect competition between smaller and larger broker-dealers. As discussed previously in the Commission's analysis of Costs, broker-dealers that outsource regulatory data reporting activities are expected to see their costs of regulatory data reporting increase, while broker-dealers that Insource may see a decrease in their regulatory data reporting costs.[1053] The Commission preliminarily believes this

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[1049] *See* Section IV.C.2, *supra.*

[1050] *See* Section IV.E.2.c, *supra,* for a discussion of how the CAT NMS Plan would enhance surveillance and deter violative behavior.

[1051] *See* Securities Exchange Act Release No. 63241 (November 3, 2010), 75 FR 69791, 69822 (November 15, 2010) (Risk Management Controls for Brokers or Dealers with Market Access).

[1052] Examples of these business activities include underwriting and advising. *See supra* note 864.

[1053] *See* Section IV.F.1.c(2)C, *supra.*

dynamic may affect competition between Outsourcers (that tend to be smaller) and Insourcers (that tend to be larger), and may increase barriers to entry in some segments of this market.

The Plan discusses certain aspects of competition pertaining to broker-dealers that relate to costs and the allocation of fees. The Plan states, "[b]roker-dealer competition could be impacted if the direct and indirect costs associated with meeting the CAT NMS Plan's requirements materially impact the provision of their services to the public. Further, competition may be harmed if a particular class or group of broker-dealers bears the costs disproportionately . . . ." The Plan asserts that it would have little to no adverse effect on competition between large broker-dealers, and would not materially disadvantage small broker-dealers relative to large broker-dealers. Regarding small broker-dealers, the Plan states, ". . . . [the allocation of costs on broker-dealers based on their contribution to market activity] may be significant for some small firms, and may even impact their business models materially . . . ." and that the Participants were sensitive to the burdens the Plan could impose on small broker-dealers, noting that such broker-dealers could incur minimal costs under their existing regulatory reporting requirements "because they are OATS-exempt or excluded broker-dealers or limited purpose broker-dealers." The CAT NMS Plan attempts to mitigate its impact on these broker-dealers by proposing to follow a cost allocation formula that (in expectation) charges lower fees to smaller broker-dealers; furthermore, Rule 613 provides them additional time to commence their reporting requirements.

The Commission preliminarily agrees with the Plan's general assessment of competition among broker-dealers, and also with the Plan's assessment of differential effects on small versus large broker-dealers. The Commission agrees that the Plan's funding model is an explicit source of financial obligation for broker-dealers and therefore an important feature to evaluate when considering potential differential effects of the Plan on competition in the market for broker-dealers. The Commission understands that the tiered funding model should result in the smallest broker-dealers paying the smallest fees, but the Plan does not outline how the magnitudes of fees would differ across the tiers. The Commission also recognizes that the potentially greater level of service specialization that may characterize small broker dealers and the potentially non-linear economies of scale may result in the compliance costs associated with the Plan competitively disadvantaging small broker-dealers, on average, relative to large broker-dealers.

However, the Commission preliminarily believes that the segments of the market most likely to experience higher barriers to entry are those that currently have no data reporting requirements of the type the Plan requires and those that would involve more CAT Reporting obligations, such as the part of the broker-dealer market that involves connecting to exchanges, because of the technology infrastructure requirements and the potential to have to report several types of order events.[1054] The opportunity to rely on service bureaus or other solutions to reduce the costs of complying with the Plan could limit any increases in the barriers to entry in this market. Nonetheless, the Commission preliminarily believes that any increases in the barriers to entry are justified because they are necessary in order for the CAT Data to include data from small broker-dealers. In the Adopting Release, the Commission explained that excluding small broker-dealers from reporting requirements would "eliminate the collection of audit trail information from a segment of the broker-dealer community and would thus result in an audit trail that does not capture all orders by all participants in the securities markets." [1055] The Commission further noted that "illegal activity, such as insider trading and market manipulation, can be conducted through accounts at small broker-dealers just as readily as it can be conducted through accounts at large broker-dealers" and that "granting an exemption to certain broker-dealers might create incentives for prospective wrongdoers to utilize such firms to evade effective regulatory oversight through the consolidated audit trail." [1056]

The Commission also recognizes that the Plan could affect the current relative competitive positions of broker-dealers in the market for broker-dealer services. To varying degrees, the economic impacts resulting from the Plan could benefit some broker-dealers and adversely affect others. The magnitude of these effects on broker-dealers could vary across and within categories of broker-dealers and classes of securities. However, there is no clear reason to expect these impacts, should they occur, to decrease the current state of overall competition in the market for broker-dealer services so as to materially burden the price or quality of services received by investors on average.

Regardless of the differential effects of the CAT NMS Plan on small versus large broker-dealers, it is the Commission's preliminary view that the CAT NMS Plan, in aggregate, would likely not reduce competition and efficiency in the overall market for broker-dealer services. Even if small broker-dealers potentially face a burden, this may not necessarily have an adverse effect on competition as a whole in the overall market for broker-dealer services. Under the CAT NMS Plan, broker-dealers would have greater reporting responsibilities than they would otherwise have. Broker-dealers could face high upfront infrastructure costs to set up a processing environment to meet reporting responsibilities. Because these infrastructure costs are upfront, fixed costs, the burden to bear these costs could be potentially greater for small broker-dealers. Instead of bearing these costs in-house, small broker-dealers could contract with outside technology vendors for reporting services. This outcome could lead to lower costs relative to not using a vendor for reporting services. For these reasons, even firms that currently do not report to OATS, but will be CAT Reporters under the Plan, could face manageable upfront costs that permit them to continue in their line of business without a severe setback in their profitability.

The Commission notes that a difficulty in assessing the likely impacts of the CAT NMS Plan on competition among broker-dealers is that competition in the markets for different broker-dealer services could be affected in different ways. As mentioned above, there is great diversity in the business activities of broker-dealers. Broker-dealer services that are likely to incur CAT reporting responsibilities include: executing orders, whether it be as an ATS or acting as a carrying broker-dealer; intermediating between customers and carrying/clearing brokers; effecting transactions in mutual funds that involve transferring funds directly to the issuer; writing options; and acting as an exchange floor broker. As noted above, these broker-dealers may also compete with the approximately 2,338 other broker-dealers in market segments that are not related to CAT reporting, such as dealing in municipal bonds or arranging

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[1054] The majority of broker-dealers do not directly engage in exchange trading, and most broker-dealers are not expected to have CAT reporting obligations. *See supra* note 864.

[1055] *See* Adopting Release *supra* note 9, at 45749.

[1056] *See id.*

private placements of securities.[1057] If CAT costs represent a significant increase in overall costs, the Plan could disadvantage broker-dealers who are CAT Reporters in the market segments that do not require CAT reporting. For example, broker-dealers that, in addition to providing services related to market transactions that are reportable to CAT, also compete to provide fixed-income order entry as a line of business may be at a relative disadvantage to competitors in the fixed-income market who do not provide broker-dealer services that are related to market activity that is reportable to CAT. Whether this disadvantage amounts to a substantial reduction in competition in various markets depends on the magnitude of the disadvantage and whether it affects the price and level of services available to investors.

The Commission recognizes that the CAT NMS Plan could result in fewer broker-dealers providing specialized services that trigger CAT reporting obligations. The Commission preliminarily believes that this potential effect on broker-dealer specialization depends on whether three key conditions are met. First, the effect requires that, compared to large broker-dealers, small broker-dealers disproportionately specialize in providing regional or niche services to a particular market segment of clients. Second, the effect requires that this specialization is correlated with business risk associated with changes in marginal cost. Finally, the effect requires that the compliance costs of the CAT NMS Plan could affect the ability for some small broker-dealers to provide these specialized services. This effect, in which fewer broker-dealers compete in specialized market segments, could thereby negatively affect the competitive dynamics in these market segments, especially if these segments currently contain relatively few broker-dealers. The Commission preliminarily believes that these conditions could hold, particularly for smaller broker-dealers, and result in fewer broker-dealers operating in specialized or niche markets if the Plan is approved.

The Commission recognizes, however, that fewer broker-dealers in a specialized segment of the market may not necessarily harm competition in that segment. In particular, the costs of compliance with the Plan may be less of a relative burden for large broker-dealers who may, compared to small broker-dealers, provide a larger portfolio of specialized services to clients. This portfolio may buffer large broker-dealers from business risk associated with specialization. Because of the lower relative burden, large broker-dealers are more likely to maintain their presence in specialized market segments. If a sufficient number of large broker-dealers, or all broker-dealers more generally, maintain their presence in specialized market segments, a net decrease in broker-dealers may not affect the competition in such market segments to a level in which the market segment offers fewer or lower quality services or higher prices. However, the Commission recognizes that negative effects on competition in specialized market segments could result if broker-dealers achieve a level of market concentration necessary to adversely affect prices for investors.

c. Market for Regulatory Services

SROs compete in the market for regulatory services.[1058] Regulatory functions include market surveillance, cross-market surveillance, oversight, compliance, investigation, and enforcement, as well as the registration, testing, and examination of broker-dealers. Although the Commission oversees exchange SROs' supervision of trading on their respective venues, the responsibility for direct supervision of trading on an exchange resides in the SRO that operates the exchange. Currently, SROs compete to provide regulatory services in at least two ways. First, because SROs are responsible for regulating trading within venues they operate, their regulatory services are bundled with their operation of the venue. Consequently, for a broker-dealer, selecting a trading venue also entails the selection of a provider of regulatory services surrounding the trading activity. Second, SROs could provide this supervision not only for their own venues, but for other SROs' venues as well through the use of Regulatory Service Agreements or a plan approved pursuant to Rule 17d–2 under the Exchange Act.[1059] Consequently, SROs compete to provide regulatory services to venues they do not operate. Because providing trading supervision is characterized by high fixed costs (such as significant IT infrastructure and specialized personnel), some SROs could find that another SRO could provide some regulatory services at a lower cost than it would incur to provide this service in-house. Until recently, nearly all the SROs that operate equity and option exchanges contracted with FINRA for some or much of their trading surveillance and routine inspections of members' activity.[1060]

As a result, the market for regulatory services in the equity and options markets currently has one dominant competitor, FINRA. This may provide relatively uniform levels of surveillance across trading venues. One SRO having a competitive advantage in providing such services could also limit the incentives to innovate in surveillance. Hypothetically, increases in the competition to provide regulatory services could promote regulatory oversight of exchanges and investor protection for investors. To the extent that a regulator could improve on current regulatory oversight, this could result in a better functioning, more liquid, financial market. However, it is possible that increased competition between SROs to provide regulatory services could have negative effects on the market if SROs compete on the basis of providing light-touch regulation, which might be less likely to detect violative activity.

The Commission preliminarily believes that the Plan could provide opportunities for increased competition in the market to provide regulatory services. In particular, designated regulatory Staff from all of the SROs would have access to CAT Data, which would reduce the differences in data access across SROs.[1061] This could reduce barriers to entry in providing regulatory services because data would be centralized and standardized, possibly reducing economies of scale in performing surveillance activities.[1062] Furthermore, because some types of previously infeasible surveillance would become possible with the availability of additional data,[1063] SROs would have greater opportunities to innovate in the type of surveillance that is performed, and the efficiency with which it is performed. In addition, when as Rule 613(a)(3)(iv) requires, SROs implement new or updated surveillance within 14 months after effectiveness of the CAT NMS Plan,[1064] any SRO could reconsider its approach to outsourcing its own regulation and whether it wants to compete for regulatory service agreements.

[1057] *See* Section IV.F.1.c, *supra.*

[1058] FINRA is the SRO responsible for supervision of trading off-exchange, which includes trading occurring on ATSs.

[1059] 17 CFR 240.17d–2.

[1060] Every equity exchange except CHX and NSX has an RSA with FINRA which allows FINRA to provide cross-market surveillance for nearly 100% of the equity markets. These RSAs differ in scope, but in every case these contracts represent a partnership between FINRA and the other SROs to provide a full set of effective regulatory services. Recently NYSE Group and NASDAQ OMX decided to significantly scale back their RSA with FINRA and directly resume most of their market surveillance and investigation regulatory obligations.

[1061] Without a Central Repository, an SRO wishing to compete as a regulatory services provider would need to invest in the IT infrastructure and enter into the data access agreements necessary to surveil broadly beyond its exchanges' data resources. By providing access to consolidated trade and order data to all SROs, CAT may reduce barriers to entry for this market. *See* Exemption for Certain Exchange Members, *supra* note 394, at 18057–58 (describing the barriers to entry of potential new national securities associations).

[1062] The Commission recognizes that efficient access to data is not the only prerequisite for entering the market to provide regulatory services and that high barriers to entry may still characterize this market.

d. Market for Regulatory Data Reporting Services

The Commission analyzed the effect of the CAT NMS Plan on competition in the market for data reporting services with a focus on its impact on the costs incurred by broker-dealers to comply with the Plan. As discussed in the Costs Section above, the Commission preliminarily believes that many broker-dealers, particularly smaller broker-dealers, would fulfill their CAT Reporting obligations by outsourcing to service bureaus and that the fees charged by the service bureaus would be a major cost driver for these broker-dealers. Further, these fees would factor into the increase in barriers to entry in the market for broker-dealer services.[1065] Therefore, the Commission preliminarily believes that any effects on competition in the market for regulatory data reporting services could have a significant effect on the costs incurred by broker-dealers in complying with the CAT NMS Plan.

The Plan provides information on broker-dealers' use of third-party service providers to accomplish current regulatory data reporting. The Plan notes that while some broker-dealers perform their regulatory data reporting in-house, others outsource this activity. The Plan does not state what proportion of broker-dealers currently outsources their regulatory data reporting work. However, the Commission interviewed a variety of broker-dealers and service bureaus in order to gain insight into the scope of broker-dealers' use of data reporting services. As noted in the Costs Section,[1066] the Commission understands that most firms outsource the bulk of their regulatory data reporting to third-party firms. The Commission preliminarily believes that the competition in the market to provide data reporting services is a product of firms choosing to perform this activity in-house or to outsource it based on a number of considerations including cost, with some firms choosing to outsource this activity across multiple service providers.

The market for regulatory data reporting services is characterized by bundling, high switching costs, and barriers to entry. The high IT infrastructure costs of regulatory data reporting creates economies of scale that give rise to the data reporting services provided by service bureaus. Broker-dealers, instead of investing in the IT infrastructure necessary for regulatory data reporting, could share the costs of the IT infrastructure with other broker-dealers by paying for a service bureau to report for them. Often, service bureaus bundle regulatory data reporting services with an order-handling system service that provides broker-dealers with market access and order routing capabilities.[1067] Sometimes service bureaus bundle regulatory data reporting services with trade clearing services.

In discussions with Staff, service bureaus stated that switching service bureaus can be costly and involve complex onboarding processes and requirements, that systems between service bureaus may be disparate, and switching service providers may require different or updated client documentation. However, service bureaus stated that on-boarding operations were infrequent and that it was rare for broker-dealers to switch between service providers. Difficulty switching between service providers could limit the competition among service bureaus to provide data reporting services, and impact the costs that Outsourcers incur to secure regulatory data reporting services. Furthermore, the high IT infrastructure costs also give rise to barriers to entry, which could slow the entry of new market participants into the market. Despite this, the trend in the market is toward expansion.[1068]

The Commission preliminarily believes that the Plan could alter the competitive landscape in the market for data reporting services in several ways. It is not clear whether demand for regulatory data reporting services would increase or decrease; although more broker-dealers would be required to report regulatory data, it is possible that flexible reporting options allowed by the Plan could make preparing data for reporting less onerous, leading to fewer firms choosing to outsource this activity.

It is possible that the Plan would increase the demand for data reporting services by requiring regulatory data reporting by broker-dealers that may have previously been exempt due to size under individual SRO rules.[1069] Because more broker-dealers would be required to report regulatory data under the Plan, the Commission preliminarily believes there could be an opportunity for increased competition in this market which might benefit all broker-dealers that outsource their regulatory data reporting activity. However, it is also possible that the increase in demand for data reporting services could serve to entrench existing providers if they capture a large share of newly created demand; this could lead to relatively higher costs for broker-dealers than they would face in a more competitive market. The potential increase in demand for data reporting services could impact the capacity of already existing data reporting services to meet this increase in demand, and this in turn could have implications for competition and pricing in the market for data reporting services. Considering the barriers to entry that characterize the market for data reporting services and this potential increase in demand, service bureaus could have less incentive to compete for broker-dealer clients because these clients are no longer scarce, and as such, the CAT NMS Plan could result in a decline in the competition for data reporting services. It is possible that broker-dealers seeking to establish relationships with service bureaus could have trouble securing them because of the limited on-boarding capacity and need to on-board many broker-dealers at once. In the short-run these capacity constraints and the high demand could increase the costs of reporting through a service bureau. However, the two year implementation period for large broker-dealers and three year period for small broker-dealers could alleviate the reduction in competition due to the onboarding capacity strain because current service bureaus have time to increase their on-boarding capacity and new entrants have time to build the necessary IT infrastructure and a client base.

The CAT NMS Plan could also dramatically change the pool of firms demanding data reporting services, which would be skewed toward firms that are smaller and on average costlier to service, which could result in higher prices, which could eventually be passed onto investors. In addition to small and medium sized broker-dealers that previously self-reported, the CAT NMS plan would result in more broker-dealers having data reporting responsibilities and the Commission preliminarily believes that these broker-dealers would predominantly be small. For example, very small broker-dealers that are currently exempt from OATS reporting requirements could seek to establish service bureau relationships. In addition, because the Plan would require additional elements in regulatory data, particularly customer data, some broker-dealers that currently self-report could no longer find it economically feasible to continue to do so.

[1063] *See* Section IV.G.2.a, *infra*, for a discussion of the efficiency improvements for surveillance.

[1064] 17 CFR 242.613(a)(3)(iv).

[1065] *See* Section IV.G.1.b, *supra*.

[1066] *See* Section IV.F.1.c(2)A, *supra*.

[1067] *See* Section IV.F.1.c(2)A, *supra*, for more information on broker-dealer use of service bureaus.

[1068] *See supra* note 920.

[1069] *See, e.g.*, FINRA Rule 7470.

In addition to possibly increasing demand for data reporting services, the CAT NMS Plan may have a mixed effect on the number of firms offering data reporting services. This can impact the competitiveness of this market, and affect the costs broker-dealers bear in securing these services. On one hand, the number of firms offering data reporting services could decrease, because the need to secure PII might increase the likelihood of liability and litigation risks in the event of a security breach.[1070] On the other hand, it is possible that the number of service bureaus offering data reporting services would increase. New reporting requirements for numerous broker-dealers could create opportunities for new entrants to meet this demand. This could increase capacity and result in innovation in providing these services, which could benefit broker-dealers needing data reporting services by potentially reducing reporting costs, or at least reducing the potential for cost increases. Lower reporting costs for broker-dealers could in turn benefit the investors who are serviced by these broker-dealers, through reduced costs.

It is also possible that the Plan would decrease the demand for data reporting services. Many broker-dealers currently pay another firm (such as a service bureau) to fulfill their regulatory data reporting; this may be because these broker-dealers find it would be more expensive to handle the translation of their order management system data into fixed formats, such as is required for OATS. If the Plan Processor allows broker-dealers to send data to the Central Repository in the formats that they use for normal operations, in drop copies for example, these broker-dealers may no longer see a cost advantage in engaging the services of a regulatory data reporting service provider because one of the costs associated with regulatory data reporting—having to translate data into a fixed format—will have been eliminated.[1071] Without the cost of having to translate data, some broker-dealers that currently outsource OATS reporting could choose, at the margin, to insource their regulatory data reporting.

The Commission preliminarily believes that this reduction in demand would not likely be realized and, if realized, would be unlikely to offset the increase in demand that would come from CAT reporters not subject to OATS reporting. As noted in the Costs Section, of the 1,800 expected CAT Reporters, 868 do not currently report to OATS.[1072] This means that the Commission expects a large proportion of CAT Reporters may be broker-dealers that currently do not have a service bureau for regulatory data reporting but would choose to engage one to manage their CAT reporting responsibilities. This is more than the Commission's estimate of 806 current outsourcing broker-dealers.[1073] Therefore, it is unlikely that the number of current Outsourcers that choose to become Insourcers would be larger than the number of non-OATS reporters that would elect to outsource. As a result, demand is more likely to increase. Further, the requirement for CAT reports to use listing exchange symbology could require pre-report data processing even if the Plan Processor allows for the receipt of reports in the formats that broker-dealers use for normal operations.[1074] As a result, the CAT NMS Plan is unlikely to eliminate the costs of processing data prior to reporting that data to the Central Repository.

2. Efficiency

The Commission has analyzed the potential impact of the Plan on efficiency. The Plan includes a discussion of certain efficiency effects anticipated if the Plan is approved; as part of its economic analysis, the Commission discusses these effects, as well as additional effects on efficiency anticipated by the Commission. The Commission preliminarily believes that the Plan as proposed is likely to result in significant improvements in efficiency related to how regulatory data is collected and used. The Plan also has the potential to result in improvements in market efficiency by deterring violative activity that could reduce market efficiency.[1075] The Commission notes, however, that efficiency gains from the retirement of duplicative and outdated reporting systems would be delayed for up to two and a half years and the interim period of increased duplicative reporting would impose significant financial burden on Industry Members.[1076]

a. Effect of the Plan on Efficiency

The Commission has analyzed the possible effects of the CAT NMS Plan on efficiency. Specifically, building off the discussion in the Plan, the Commission analyzed the effect of the Plan on the efficiency of detecting violative behavior through examinations and enforcement, on the efficiency of surveillance, on market efficiency through deterrence of violative behavior, on operational efficiency of CAT Reporters, and on efficiencies through reduced ad hoc data requests and quicker access to data.

The current state of regulatory data collection and use provides ample opportunity for efficiency improvements. First, regulators' ability to efficiently perform cross-market surveillance is hindered by data fragmentation.[1077] Second, regulators' ability to efficiently supervise and surveil market participants and carry out their enforcement responsibilities is hindered by limitations in current regulatory data.[1078] Finally, there are a number of other inefficiencies associated with the current system of regulatory data collection. These include: Delays in data availability to regulators; lack of direct access to data collected by other regulators results in numerous ad-hoc data requests; and the need for regulatory Staff to invest significant time and resources to reconciling disparate data sources.[1079]

[1070] *See* Section IV.F.4.a(3), *supra* for a discussion of the potential exit of service bureau resulting from the risk of a security breach.

[1071] The Plan does not mandate the data ingestion format. *See* CAT NMS Plan, *supra* note 3, at Appendix C, at Section A.1(b). The Commission recognizes that the CAT Reporters Study found no difference in expected costs for a fixed format, but requests comment on why the costs may be similar when it would seem logical that allowing flexible data reporting formats would reduce costs for broker-dealers. *See* Request for Comment Nos. 318 and 331 in Section IV.F.5, *supra*.

[1072] The Plan estimates that 1,800 broker-dealers are expected to have CAT reporting obligations. Based on data from FINRA, 932 broker-dealers currently report OATS data. 1,800–932=868. *See* Section IV.F.1.c(2)A, *supra*.

[1073] *Id.*

[1074] *See supra* note 949.

[1075] The Commission has also analyzed the likely effect of the Plan on allocative efficiency of existing capital within the industry. These potential effects are discussed in Section IV.G.3, *infra*.

[1076] *See* Section IV.F.2, *supra*.

[1077] *See* Section IV.E.2.c, *supra*.

[1078] *See* Section IV.E.2.c, *supra*.

The Plan discusses a number of expected efficiency effects associated with the Plan, including both positive and negative effects.[1080] The Commission preliminarily agrees with the Plan's assessment and has identified additional efficiency effects as well. The Plan outlines several positive effects relating to efficiency in: Monitoring for rule violations; performing surveillance; and supporting fewer reporting systems. Some of these efficiencies are also discussed in the Benefits Section of this analysis.[1081]

The Plan concludes SROs would experience improved efficiency in the detection of rule violations, particularly for violations that involve trading in multiple markets.[1082] The Plan states an expectation that SROs would need to expend fewer resources to detect violative cross-market activity, and such activity would be detected more quickly.[1083] The Commission agrees that the Plan would result in improvements in efficiency in the performance of examinations of market participants by SROs and the Commission. Improvements to data availability and access through the Central Repository could allow SROs and the Commission to more efficiently identify market participants for examination.[1084] The Commission also agrees that the Plan would improve the efficiency of enforcement investigations. If regulatory data access improves, the quality and quantity of enforcement investigations could increase through improvements to the comprehensiveness and timeliness of data used to support investigations. As mentioned previously, it can take months for regulators to assemble the data necessary to comprehensively investigate a regulatory inquiry.[1085] To the extent that the Plan allows regulators to access more comprehensive data directly from the Central Repository, regulators would be able to collect data faster and start processing it sooner, resulting in a more efficient data analysis portion of an investigation. As a result, follow-up enforcement inquiries could be avoided entirely in situations where data from the Central Repository allows regulators to conclude an initial inquiry without initiating an enforcement investigation.[1086] This benefit would be observable to both regulators and subjects of investigations, for whom ongoing enforcement investigations can be costly and the source of uncertainty.

The Plan states that the Participants believe that the CAT NMS Plan could improve the efficiency of surveillance.[1087] According to the Plan, this improvement is due to a number of factors including: Increased surveillance capacity; improved system speed, which would result in more efficient data analysis; and a reduction in surveillance system downtime.[1088] The Plan also cites reduced monitoring costs,[1089] but the Commission notes that estimates in the Costs Section of the Plan predict increased surveillance costs if the Plan is approved. The increased surveillance costs predicted in the Plan could reflect more effective surveillance under the Plan. Although the Plan does not discuss the cost-benefit trade-off of increased surveillance directly, the Commission notes that achieving the level of surveillance that would be possible if the Plan is approved would likely be more expensive using currently available data sources, if it is achievable at all, due to the inefficiencies that currently exist in delivering regulatory supervision, discussed previously.[1090]

The Commission preliminarily believes that CAT may reduce violative behavior.[1091] The Plan states that CAT may serve a deterrent effect, thereby reducing investor losses attributable to such behavior.[1092] Improvements in the efficiency of market surveillance, investigations, and enforcement could directly reduce the amount of violative behavior by identifying and penalizing market participants who violate rules and who would more easily go undetected in the current regime. Furthermore, market participants' awareness regarding improvements in the efficiency of market surveillance, investigations, and enforcement (or perceptions thereof), and the resultant increase in the probability of incurring a costly penalty for violative behavior, could deter violative behavior.[1093] Reductions in violative behavior through both of these economic channels could improve market efficiency, assuming violative behavior receives diminishing marginal gains and generates increasing marginal harm.[1094]

The Plan discusses increased efficiency due to reductions in redundant reporting systems.[1095] The Plan also discusses increases in system standardization, which would allow consolidation of resources, including the sunsetting of legacy reporting systems and processes, as well as consolidated data processing envisioned from the Plan.[1096] However, the Commission is aware that the Plan, as proposed, calls for a period of years during which Industry Members would face duplicative reporting systems before older regulatory data reporting systems are retired.[1097] This period of duplicative reporting would impose a considerable financial burden on Industry Members.[1098]

The Plan discusses two other efficiency improvements: a reduction in ad-hoc data requests and more fulsome access to raw data. The Plan predicts a reduction in ad-hoc data requests, which would free up resources previously used to service such requests.[1099] However, while the Plan anticipates a decrease in ad-hoc data requests as a result of Plan-related data improvements, the Commission notes that it is possible that some types of ad-hoc data requests might increase. For instance, even if enforcement investigations initially use CAT Data, later-stage investigations may involve requests for data not included in CAT Data, such as commissions paid or a locate identifier for a short sale. An increase in the efficiency of enforcement investigations could increase the total number of later-stage investigations.[1100] Such investigations could produce additional ad-hoc data requests and require other interactions with market participants.[1101] The Commission recognizes that these data request increases would partially offset the efficiency improvements from the reduction in data requests noted above, but the Commission preliminarily believes that the Plan would improve efficiency by reducing the total number of data requests. The Commission, however, acknowledges that this decrease in data requests may be partially offset in an increase in the number of investigations in general, because enhanced surveillance is likely to detect more potentially violative activity that would need to be investigated.

[1079] *See* Section IV.D.2.b, *supra*. These other inefficiencies are discussed above in the Baseline and Benefits Sections.

[1080] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

[1081] *See* Section IV.E, *supra*.

[1082] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b); *see also* Section IV.E.2, *supra*.

[1083] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

[1084] *See* Section IV.E.2.c, *supra*.

[1085] *See* Section IV.E.2.c, *supra*.

[1086] The Commission notes that this does not preclude an increase in total enforcement investigations, but rather that some enforcement investigations may determine earlier in the investigation that no violation occurred.

[1087] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b) (stating that the CAT NMS Plan could reduce monitoring costs, enable regulators to detect cross-market violative activity more quickly, provide regulators more fulsome access to unprocessed data and timely and accurate information on market activity, and provide CAT Reporters with long term efficiencies resulting from the increase in surveillance capabilities); *see also* IV.E.2.c, *supra*.

[1088] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b). The Participants surveyed the 10 exchange-operating SRO groups on surveillance downtime. In conversations with Staff, the Participants informed Staff that average surveillance downtime was 0.03% from August 1, 2014 to August 31, 2015, and ranges from 0 to 0.21% across SROs.

[1089] *See id.*

[1090] *See* Section IV.E.2, *supra*.

[1091] *See* Section IV.E.2.c, *supra*.

[1092] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

[1093] *See, e.g.*, Schelling, Thomas, "The Strategy of Conflict: Prospectus for a Reorientation of Game Theory," *Journal of Conflict Resolution*, Vol. 2 No.3 (1958); Ellsberg, Daniel, "The Crude Analysis of Strategic Choices," *American Economic Review*, Vol. 51, No. 2 (1961).

[1094] *See, e.g.*, Becker, Gary and William Landes, "Essays in the Economics of Crime and Punishment," Columbia University Press, (1974).

[1095] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C) (discussing benefits of CAT to broker-dealers).

[1096] *See id.* at Appendix C, Section B.8(b).

[1097] *See id.* at Appendix C, Section B.9.

[1098] *See* Section IV.F.2, *supra* for a discussion of duplicative reporting and whether broker-dealers would pass costs on to investors.

[1099] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

Furthermore, the Plan anticipates more robust access to unprocessed regulatory data, which could improve the efficiency with which SROs could respond to market events where they previously had to submit data requests and wait for data validation procedures to be completed before accessing data collected by other regulators.[1102] The Commission recognizes that unprocessed data may contain errors that would later be fixed.[1103] The Commission preliminarily believes the benefits of the greater timeliness of the unprocessed data may justify the lack of validations and corrections in such unprocessed data.[1104]

b. Effects of Certain Costs of the Plan on Efficiency

The Plan discusses several sources of inefficiency due to costs of the Plan that are difficult to quantify, and are transient in nature. First, the Plan anticipates that implementation would introduce new costs related to data mapping and data dictionary creation.[1105] Second, the Plan discusses needs for expenditures, such as staff time for compliance with encryption requirements associated with the transmission of PII.[1106] While the Commission recognizes that these are additional activities and costs that the Plan would require, it views these as additional costs rather than inefficiencies and, though the Commission cannot quantify the magnitude, these costs are likely to have relatively minor contributions to overall costs of the Plan because they impose technical requirements on systems that industry will need to significantly alter to comply with other provisions in the Plan.[1107] Furthermore, the Commission notes that the costs of data mapping and encryption requirements are likely to be included in costs covered by surveys conducted by the Participants while preparing the Plan because these requirements were known publicly at the time the surveys were conducted, and are anticipated to be small relative to other costs entailed in potentially complying with the Plan if it is approved.[1108]

The Plan notes that there could be a market inefficiency effect related to the funding proposal for the Plan. For example, the cost allocation methodology for the Plan could create disincentives for the provision of liquidity, which could impair market quality and increase the costs to investors to transact.[1109] The Plan notes that the funding principles set forth in the Plan[1110] seek to mitigate the risk of reduction in market quality resulting from allocation of costs from building and operating the Central Repository.[1111] The Commission preliminarily recognizes that negative effects on efficiency could result from the CAT Funding Model.[1112] First, data reporters could respond to the Funding Model by taking actions to limit their fee payments, such as exiting the market or reducing their activity levels. Second, the funding policy of the CAT NMS Plan of aligning fees closely with the amounts that are required to cover costs could create incentives for the Plan Processor or Operating Committee to propose a cost schedule for the CAT that matches a given fee schedule, but is not the most efficient cost schedule for meeting the CAT regulatory objectives.[1113]

3. Capital Formation

a. Enhanced Investor Protection

The Commission has examined the potential effects on capital formation discussed in the Plan in addition to other potential effects on capital formation that the Commission believes could result if the Plan is approved. The Commission preliminarily believes that the Plan would have a modest positive effect on capital formation.

The Plan's analysis regarding capital formation concludes that the Plan would generally not have a deleterious effect on capital formation and could bolster capital formation that could lead to increased investor participation in capital markets.[1114] The Plan's analysis provides several reasons why the Plan would not adversely affect capital formation. Specifically, it asserts that the Plan would not place any undue burden on primary issuances; would not pass along CAT related costs to "investors in a way that would limit their access to or participation in capital markets"; and would not discourage market participation as a result of data security concerns given the data security safeguards outlined in the Plan.[1115] The Commission preliminarily agrees with the rationale of the Plan's analysis, but addresses some additional considerations regarding the scope of the Plan's effects on capital formation, as well as the channels through which these effects could accrue.

The Plan's analysis states that the Plan may improve capital formation by improving investor confidence in the market due to improvements in surveillance. As discussed previously,[1116] the Commission believes that the Plan would provide substantial enhancements to investor protection through improvements to surveillance, particularly for cross-market trading.[1117]

[1100] This does not preclude regulators determining sooner if the actions they are investigating are not violative. Rather, an increase in the total number of enforcement investigations due to efficiency improvements can result in more later-stage investigations even if regulators are better able to conclude some investigations earlier.

[1101] *See* Section IV.D.1.c, *supra.*

[1102] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

[1103] *See* Section III.B.10, *supra.*

[1104] *See* Section IV.E.2.c, *supra,* for an example of benefits from regulators accessing uncorrected data on T+1.

[1105] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

[1106] *See id.*

[1107] *See* Section IV.G.2.a, *supra.*

[1108] *See* Section IV.F.1, *supra.*

[1109] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(b).

[1110] *See id.* at Section 11.2, Appendix C, Section B.7(b)(iv)(C).

[1111] *See id.* at Appendix C, Section B.7.(b)(iv)(C).

[1112] *See id.* at Appendix C, Section B.7(b)(v)(B).

[1113] Economics research that dates back to Averch, Harvey, and Johnson, Leland L. (1962) ("Behavior of the Firm Under Regulatory Constraint," American Economic Review 52 (5): 1052–1069) characterizes an incentive of regulated utilities to inflate their costs in order to establish larger rate bases and justify higher rates. An opposite effect would arise if the regulated utility were unable to justify sufficient fee revenue to pay the fixed cost of expanding the base.

[1114] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.8(c).

[1115] *See id.*

[1116] *See* Section IV.E.2.c, *supra* and CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(B)(1) and (2), B.7(b)(iii)(C).

[1117] FINRA currently provides cross-market surveillance, but limitations in the data (*e.g.* reliable cross-market linkages, customer identification, As discussed throughout, improved surveillance, as well as other regulatory activities, could decrease the rate of violative activity in the market, reducing investor losses due to violative activity, to the extent that such behavior is not already deterred by current systems.[1118] If improved surveillance leads to expectations of fewer losses due to violative activity, this may increase capital formation by facilitating a market where investors could be more likely to mobilize capital into securities markets.[1119]

The Commission preliminarily believes there could be additional increases in capital formation in the form of improvements in allocative efficiency of existing capital within the industry. If investors perceive an environment of improved surveillance, they could be willing to allocate additional capital to liquidity provision or other activities that increase market efficiency. Furthermore, an environment of improved surveillance efficiency could result in the reduction of capital allocated to violative activities that impose costs on other market participants, because these market participants may no longer find it possible to engage in such behavior that exposes them to regulatory action. In this scenario, this reallocation of capital could improve market quality and efficiency even if net capital formation changes little. In addition to the potential reallocation of capital currently mobilized toward violative activities, investor capital that may currently be diverted because of the risk of loss to violative activities could also be reallocated should the violative activities decrease. If the CAT NMS Plan reduces manipulative quoting activities, either through improved detection/enforcement or through deterrence of such activities, then investors are less likely to make capital allocation decisions in response to manipulative quoting activities. In this scenario, because manipulative quoting activities have been reduced, the contribution of manipulation to prices has been reduced and prices should therefore better reflect fundamentals. It would follow that, to the extent that displayed prices better reflect fundamentals rather than manipulation, investors could allocate capital more efficiently for their purposes. The Commission notes, however, that market participants engaging in allowable activity that might risk additional regulatory scrutiny under the Plan regime could allocate capital to other activities to avoid this scrutiny, because even when activity is not violative, interacting with regulators can be costly for market participants.[1120] This reallocation away from allowable activity to avoid regulatory interactions could result in capital allocations that are less efficient.[1121]

The Plan states that the costs from CAT are unlikely to deter investor participation in the capital markets.[1122] The Commission notes, however, that the final costs of the Plan and the funding mechanism for CAT are not wholly certain at this time; thus, it is the Commission's view that there is uncertainty concerning the extent to which investors would bear Plan costs and consequently to what extent Plan costs could affect investors' allocation of capital. As mentioned above in the Costs Section,[1123] the Commission preliminarily does not know whether Plan costs incurred by the industry are likely to be passed on to investors. Competition in the market for broker-dealer services could mitigate some of these costs, but it may not minimize costs passed on to retail investors. Despite these potential costs to investors, investors could believe that the additional benefits they receive from the potential of a market that is more effectively regulated justify any additional costs they pay to access capital markets.

b. Data Security

The Commission preliminarily agrees with the Plan's assessment that data security concerns are unlikely to materially affect capital formation. In its discussion of capital formation, the Plan recognizes that data security concerns could potentially impact capital formation through market participants' perception that sensitive proprietary data might be vulnerable in case of a data breach at the Central Repository. The Plan's analysis discusses the security measures that are required by Rule 613 and the manner in which they have been implemented in the Plan. It concludes that these security measures are sufficient and that it is unlikely market participants would reduce their participation in markets in a manner that would affect capital formation.

As noted above, the Commission agrees that concerns regarding data security are unlikely to substantially affect capital formation, but that some uncertainty about the risks exist because of the variations in the potential security solutions and their resulting effectiveness.[1124] The Commission notes that the consequences of a data breach, nonetheless, could be quite severe. It is inherently difficult to form reliable economic expectations given that security breaches of the form that could occur under the CAT NMS Plan occur infrequently. Therefore, as described in Section IV.F above, even if a CAT Data security breach is unlikely with the safeguards required by the Plan, the scope of the potential consequences of such a breach in the event that one should occur is important to evaluating the risk to capital formation.[1125]

A data breach could also substantially harm market participants by exposing proprietary information, such as a proprietary trading strategy or the existence of a significant business relationship with either a counterparty or client. The Commission notes, however, that broker-dealers already bear such risks in transmitting regulatory data to SROs. The Commission preliminarily believes that the marginal increase in the risks to broker-dealers associated with a data breach would be unlikely to deter

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parent order identification) limit the scope and reliability of this surveillance.

[1118] For example, as discussed in Section IV.E.2.c, the Plan would allow regulators to more efficiently conduct cross-market and cross-product surveillance relative to surveillance using current data sources, and the requirement that data be consolidated in a single database would assist regulators in detecting activity that does not appear clearly violative until data is linked and evaluated from multiple venues. To the extent that market participants are aware of the current challenges to regulators in performing cross-market surveillance and aggregating data across venues, and to the extent that they believe that their violative behavior is more likely to be detected if regulators' ability to perform those activities improves, they may reduce or eliminate violative behavior if the CAT Plan is approved.

[1119] There is evidence in the academic finance literature that countries with weaker investor protections, considering both the character of rules as well as the quality of enforcement, have smaller and narrower capital markets in terms of investor participation. *See* La Porta, R. et al, "Legal Determinants of External Finance," *Journal of Finance*, Vol. 52 No. 3 (1997).

[1120] *See* Section IV.F.4.b, *supra*, for a discussion of the potential for the efficiencies in surveillance, examinations, and investigations to increase the number of regulatory activities, including the number of regulatory activities on conduct that turns out not to violate regulations.

[1121] The Commission is unable to estimate the magnitude of allowable economic activity that does not occur when market participants anticipate relatively high costs of demonstrating regulatory compliance in the course of normal regulatory interactions such as exams and inquiries because this activity is not observable. However, Section IV.F.1.c(2) discusses how some broker-dealers avoid self-reporting regulatory data because of expectations of higher costs to demonstrate compliance, providing an example of an allowable activity that is perceived as costly due to the risk of compliance costs. *See* Section IV.F.1.c(2), *supra*.

[1122] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(c).

[1123] *See* Section IV.F.2, *supra*.

[1124] *See* Section IV.F.4.a, *supra*.

[1125] *See id.* for a more thorough discussion of the costs and risks of security breaches of the Central Repository.

broker-dealers from participating in markets.

A data breach could potentially reveal PII of investors. To address the potential for harm to the investing public and the health of capital markets through such a breach, the Plan has enhanced requirements for security around PII. Those requirements include a separate PII-specific workflow, PII-specific authentication and access control, separate storage of PII data, and a full audit trail of PII access.[1126] The Commission preliminarily believes that these risks will not materially affect investors' willingness to participate in markets because they already face these risks with PII shared with broker-dealers, though not in one centralized location.[1127] However, the risk and costs of a security breach would be only one factor that market participants would consider in deciding whether to participate in the market. Another consideration would be investor protection, which the Commission preliminarily believes would increase under the CAT NMS Plan.[1128]

4. Related Considerations Affecting Competition, Efficiency and Capital Formation

The Commission recognizes that the Plan's likely effects on competition, efficiency and capital formation are dependent to some extent on the performance and decisions of the Plan Processor and the Operating Committee in implementing the Plan, and thus there is necessarily some uncertainty in the Commission's analysis. Nonetheless, the Commission believes that the Plan contains certain governance provisions, as well as provisions relating to the selection and removal of the Plan Processor, that mitigate this uncertainty by promoting decision-making that could, on balance, have positive effects on competition, efficiency, and capital formation.

a. *The Efficiency of Plan Decision-Making*

As noted in several places above,[1129] future decisions of the Operating Committee could significantly alter the economic effects of the Plan. As a result, this economic analysis also considered whether the process by which the Operating Committee would make such decisions promotes efficiency. According to the Plan, the inability of the Operating Committee to act in a timely manner could create consequences for efficiency, competition, and capital formation.[1130] On the other hand, the Commission notes that consequences also could arise if the Operating Committee makes decisions so quickly that it does not consider all relevant information. This Section analyzes whether the decision-making processes in the Plan promote timely decisions that consider all relevant information of value. While the Plan considers the potential for inefficiencies in the decision-making process, the Commission preliminarily believes that certain governance provisions in the Plan could create some inefficiencies in the decision-making process, but that these inefficiencies are limited or exist to promote better decision-making. The Plan discusses two areas where the proposed governance structure impacts the efficiency of the decision-making process: (1) Voting protocols and (2) the role of industry advisers.[1131] The Commission also considered the efficiency implications of the level of detail included in the Plan and the scalability of the Plan.

The Plan specified three types of voting protocols and determines when each protocol applies.[1132] The Plan requires unanimous voting in only three circumstances: A decision to obligate Participants to make a loan or capital contribution, a decision to dissolve the Company, and a decision to take an action by written consent instead of a meeting.[1133] Further, the Plan requires supermajority voting in instances considered by the Participants to have a direct and significant impact on the functioning, management, and financing of the CAT System,[1134] such as selection and removal of the Plan Processor and key officers, approving the initial Technical Specifications, approving Material Amendments to the Technical Specifications proposed by the Plan Processor, and approving direct amendments to the Technical Specifications proposed by the Operating Committee.[1135] The Plan considers other matters as routine matters that arise in the ordinary course of business and would be subject to majority voting. As a practical matter, Majority Vote is the default standard for decisions other than those requiring supermajority or unanimous voting.

The Plan balanced the efficiency of the decision-making process against the value of considering minority and dissenting opinions in proposing these voting protocols.[1136] In particular, the Plan recognizes that some voting protocols might impede the effective administration of the CAT System.[1137] From a mechanical perspective, voting protocols determine a threshold for a passing vote. Unanimity requires a threshold of 100% yes votes while majority voting requires a threshold of more than 50% yes votes and Supermajority requires two-thirds or more. The Plan explains that too-high a threshold for decision-making, such as may be the case in applying unanimity to all voting matters, could limit the ability of the Operating Committee to adopt broadly agreed upon provisions.[1138] For example, in the extreme, requiring unanimity in voting could result in one dissenting opinion holding up the entire decision-making process. Conversely, the Plan explains that a threshold that is set too low might limit the opportunities for the consideration of dissenting or minority opinions and alternative approaches.[1139] For example, if voting thresholds were too low, a set of Participants could potentially adopt provisions that might provide them a competitive advantage over other Participants.

The Commission preliminarily agrees with the discussion on the need to balance efficiency in the voting protocols in the Plan. The Commission notes that the speed and ability to make a decision are key components of whether the Plan promotes efficiency in its operations. High-vote thresholds may result in an increase in the effort needed to obtain enough votes to make a decision. Further, in addition to the drawn out discussions necessary to obtain a unanimous vote, a unanimous vote might also require compromises that reduce the efficiency of the decision-making process. This could be particularly costly in situations in which the Operating Committee must make a decision by a particular date. It could also result in inaction for decisions related to making discretionary changes that could improve data qualities, such as updates, if the Participants disagree among the various alternatives.

[1126] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Sections 4.1.1–4.1.6. The Commission notes that there is considerable diversity in the approaches proposed by the Bidders. Further, the Participants chose to give the Plan Processor flexibility on many implementation details and the Plan states the requirements as a set of minimum standards. Consequently, the final PII security solution cannot be evaluated—only the minimum standards specified in the Plan.

[1127] *See* Section IV.F.2, *supra*.

[1128] *See* Section IV.E.2, *supra*.

[1129] *See, e.g.*, Section IV.C.2, *supra*.

[1130] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(d).

[1131] *See id.*

[1132] *See* Section III.A.3.a(3), *supra*, for a discussion of the management of the Company, including the definitions of the voting protocols and details on their application.

[1133] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.11(b), Voting Criteria of the Operating Committee.

[1134] *See id.* at Appendix C, Section D.11(b).

[1135] *See id.* at Appendix C, Section D.11(b). The Plan also requires supermajority voting on matters outside the ordinary course of business, such as modifications to a Material Contract, incurring debt, making distributions or tax elections, or changing the fee schedules.

[1136] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(d).

[1137] *See id.*

[1138] *See id.*

[1139] *See id.*

Furthermore, while the decision-making processes with a very low voting threshold would be faster, the resulting decisions might not consider all relevant information.[1140] As a result, the Commission preliminarily agrees that the inefficiencies in the voting protocols in the Plan are limited enough to strike a balance between the inefficiencies of the decision-making process and the quality of the decisions.

The Plan also discusses the role of industry representation as part of the governance structure.[1141] Section 4.13 of the Plan requires an Advisory Committee that contains twelve members, including representatives from 7 types of broker-dealers, 2 institutional investors, and 3 individuals.[1142] In addition, the Plan says that the Advisory Committee is "intended to support the Operating Committee and to promote continuing efficiency in meeting the objective of the CAT."[1143] The Plan also indicates that it is important to include industry representation to assure that all affected parties have representation.

The Commission preliminarily agrees with the discussion in the Plan that including industry representation might result in a more efficiently designed CAT, but adds that an Advisory Committee also adds operational inefficiencies. As discussed above, the Commission preliminarily believes that an Advisory Committee could add more diverse viewpoints to the debates surrounding Operating Committee decisions and thus reduce the risk that members of the Operating Committee could make decisions without first obtaining a full understanding of the underlying facts or the likely impact of its decisions.[1144] The Commission also recognizes, however, that including an Advisory Committee in the decision-making process might add complexity to the process and decisions might require more time relative to allowing the Operating Committee to make decisions without the input of an Advisory Committee. The inclusion of an Advisory Committee could thereby potentially adversely affect the efficiency of the Plan's operation. In general, the Commission preliminarily believes that as long as the Advisory Committee adds sufficiently useful information, the benefits from the Advisory Committee would justify any operational inefficiencies from the inclusion of the Advisory Committee.

The Commission considered an additional source of potential efficiencies in the decision-making process. The Plan specifies minimum standards for particular provisions or solutions in Appendix D of the Plan instead of specifying the solutions themselves in the Plan.[1145] While this creates uncertainty in the costs and benefits of the Plan and reduces the transparency for the bidders, the Commission recognizes that decisions to not specify certain solutions in the Plan could promote efficiency in the decision-making process of the Operating Committee. The Operating Committee and/or Selection Committee would effectively decide upon the unspecified details when selecting the Plan Processor and when approving the Technical Specifications.[1146] As such, certain technical details may not appear in the Plan and may not be subject to Commission approval or, potentially, to public comment. Instead, the Operating Committee could implement such decisions much more quickly and at a potentially lower cost. The Commission believes that the Commission and public review process could add value to the decision-making process, particularly in assuring that the decisions consider costs and benefits. However, a notice and comment process for certain technical changes could be cumbersome and time-consuming, and may not therefore be justified in the context of certain technical issues. The Plan therefore may be more agile and efficient in its ability to upgrade and improve systems quickly. On the other hand, the cost of this efficiency comes in the form of the significant uncertainties surrounding the economic effects of the Plan during the approval process.

Provisions of the Plan should also promote efficiently implementing expansions to the CAT Data. Appendix C of the Plan notes that the Plan Processor must ensure that the Central Repository's technical infrastructure is scalable and adaptable.[1147] These provisions should reduce the costs and time needed for expansions to the Central Repository.

b. Selection and Removal of the Plan Processor

The CAT NMS Plan uses a request for proposal ("RFP") to select the Plan Processor that would design, build, and operate the Central Repository. The winning bidder becomes the sole supplier of the operation of the Central Repository. The Commission preliminarily believes this is necessary to achieve the benefits of a single consolidated source of regulatory data.

The competitiveness of the selection process influences the ultimate economic effect of the Plan because those effects depend in large part on the efficiency and effectiveness of the Plan Processor. In particular, many of the details of the Plan would be determined either by the winning bid or in negotiations with the Plan Processor after selection. The Plan Processor exercises control over the future costs of operating and maintaining the Central Repository in this context and the Plan Processor chooses its performance level, subject to the minimum standards in the Plan and with oversight from the Operating Committee.

Given the effects associated with the selection process for the Plan Processor, the Commission considered whether the Plan promotes a competitive process and whether the Plan contains provisions that would create incentives for the chosen Plan Processor to set costs and performance competitively. As explained below, the Commission preliminarily believes that the selection process generally promotes competition but that there are also a few potential limitations on competition. Moreover, the Commission recognizes that a competitive bidding process does not necessarily mean that the selected bidder would behave competitively after being selected as the Plan Processor.[1148]

[1140] *See* Section IV.E.3.d, *supra*, for a discussion of how certain governance provisions could help promote better decision-making by the relevant parties.

[1141] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.8(d).

[1142] *See id.* at Section 4.13 (Advisory Committee).

[1143] *See id.* at Appendix C, Section B.8(d).

[1144] *See* Section IV.E.3.d(2)B, *supra.*

[1145] For example, the Plan provides minimum standards for regulator access to CAT Data but does not propose any particular method for regulatory access. Nor does the Plan specify whether the regulators would have work space on servers at the Central Repository or whether regulators would have to download the results of every query before being able to process such results.

[1146] For example, the Selection Committee would decide on the details of regulator access in conjunction with selecting the Plan Processor or in subsequent negotiations with the selected Plan Processor.

[1147] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.5(a).

[1148] *See* Goldfine and Vorrasi, "The Fall of the *Kodak* Aftermarket Doctrine: Dying A Slow Death in the Lower Courts," 74 Antitrust Law Journal No. 1 (2004), p. 209 (stating that "competition in the

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But the Commission preliminarily believes that the Plan could control the costs of the Central Repository and the performance of the Plan Processor if the Plan included sufficient competitive incentives for the selected Plan Processor. While the Commission preliminarily believes that threat of replacement of the Plan Processor could incentivize them to set costs and performance competitively, the high cost of replacement could limit these incentives.[1149]

(1) Competitiveness of the Plan Processor Selection Process

The Commission believes that two elements determine the competitiveness of the bidding process. The first relates to the voting process and the second relates to the degree of transparency in the bidding process. The Commission preliminarily believes that the Plan provisions relevant to these two factors could promote competition in the bidding process and limit the risk that selection of the Plan Processor would be affected by a conflict of interest, thereby promoting better decision-making.

The CAT NMS Plan outlines a bidding process whereby a Selection Committee votes on bidders during several rounds of voting that each narrow the potential bidders until one bidder is selected.[1150] Pursuant to the Plan, the bidders compete to be selected by proposing solutions to comply with Rule 613 and documenting the anticipated costs of doing so. The Plan also contains provisions for revising Bids if the Commission approves the Plan.[1151]

The Participants received 31 Intent to Bid forms during the RFP process; 13 of the potential bidders withdrew before January 30, 2014; the Participants reported receiving 10 Bids by April 2, 2014.[1152] Six of these Bidders were shortlisted through the selection process in July 2014, including one SRO that is also a Bidder. In November 2015, the shortlist was further narrowed to three Bidders.[1153]

In considering how competitive the voting process is, the Commission has considered whether conflicts of interest could limit competition in the bidding process through the proposed participation of a bidder representative on the Selection Committee. The Plan includes provisions that mitigate this conflict but that have not eliminated it completely. In particular, the Plan requires recusal of an SRO from any selection round if that SRO or its affiliate has submitted a bid—or is included as a material subcontractor as part of a bid—that is still under consideration in such round.[1154] Similarly, the Plan creates information barriers between the Staff at the SRO selecting the bidder and the Staff undertaking the bidding.[1155] These provisions promote a level playing field for all bidders because the SRO bidder does not know any more than a non-SRO bidder and so has no informational advantage in submitting a bid that the Selection Committee may find favorable. Further, the information barriers prevent those working on the bid from attempting to persuade members of the Selection Committee toward their bid in a way that other bidders cannot. The Commission recognizes, however, that there is a residual risk in having an SRO among the bidders; it is possible that voting Participants would be biased for or against that SRO either because they compete with that SRO in another market (and could gain a competitive advantage in that market by acting as Plan Processor) or because of repeated interactions with that SRO.

The Commission also recognizes that, to the extent the Operating Committee has specific preferred solutions as to how the Plan should be implemented, the degree to which the Committee is transparent about those preferences in the bidding process would affect the competitiveness of that process. For example, if the Commission were to approve the Plan and bidders were thereafter given the opportunity to revise their bids, the Operating Committee could promote competitiveness in the bidding process by outlining its preferences. Transparency into the Operating Committee's views regarding potential optimal solutions could assist a bidder in revising its bid to inform how that bidder could supply those optimal solutions, and the Selection Committee could then compare all bidders on those particular solutions. To the extent that the Operating Committee has strong preferences toward particular solutions but did not specify those preferences directly in the Plan, the bidder may not know that it could improve its chances of winning the bid by proposing a different solution and the Selection Committee would not know whether the bidder is capable of delivering the preferred solution more efficiently than the other bidders. On the other hand, the Commission notes that specifying a preferred solution also has the potential to discourage bidders from competing on innovation by proposing novel approaches that may deliver superior outcomes.

The Commission has no reason to believe that the Operating Committee has preferred solutions beyond what is in the Plan that would significantly impact the competitiveness of the Plan Processor selection process. Indeed, Appendix D of the Plan details numerous minimum standards not included in the RFP. In addition, the Plan also provides details on the range of solutions proposed by bidders and why the Operating Committee may not have a preference and therefore did not select a particular solution. This provides transparency to the bidders on the criteria the Selection Committee may use to compare bidders.

(2) Competitive Incentives of the Selected Plan Processor

The Plan could create competitive incentives for the selected Plan Processor by detailing strong requirements for the Plan Processor and providing an efficient mechanism to

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primary market, as a matter of law, does not necessarily preclude the possibility of market power (and anticompetitive conduct) in the aftermarkets for parts and services," and citing *Eastman Kodak Co.* v. *Image Technical Services, Inc.*, 504 U.S. 451 (1992)). Economic theories of the relation between primary markets and aftermarket are the focus of other literature as well; *see infra* note 1149. (In the context of the Plan, the "primary market" would be the initial selection of the Plan Processor while in the "aftermarket," the selected Plan Processor would supply a performance level for the given revenues received from the Company.)

[1149] Under the theory of contestable markets, it is possible for the sole supplier of a service to behave as if there multiple suppliers, and thus not exercise monopoly power. Necessary conditions include the absence of entry and exit costs. William J. Baumol, John C. Panzar, Robert D. Willig (1982), *Contestable Markets and the Theory of Industry Structure.* When the conditions needed to support contestable markets are not met, the presence of alternative suppliers may not be sufficient to prevent the costly exercise of monopoly power, post-selection. For example, if the supplier cannot make complete and binding commitments to the price and quality of its post-selection services, and the buyer becomes locked into the sole supplier (*e.g.*, due to switching costs or other sources of friction), a competitive selection process may lead to monopoly outcomes, post-selection; *see, e.g.*, Carl Shapiro, 1995, "Aftermarkets and Consumer Welfare: Making Sense of Kodak," Antitrust Law Journal, and Borenstein, Severin, Jeffrey K. Mackie-Mason, and Janet S. Netz, 1995, Antitrust Policy in Aftermarkets, Antitrust Law Journal 63: 455–82. For a recent survey of alternative theories, *see* section 3.1, Dennis W. Carlton and Michael Waldman, 2014. "Robert Bork's Contributions to Antitrust Perspectives on Tying Behavior," Journal of Law & Economics.

[1150] *See* CAT NMS Plan, *supra* note 3, at Section 5.2 (Bid Evaluation and Initial Plan Processor Selection).

[1151] *Id.* at Section 5.2(e).

[1152] For details on the progression of the CAT RFP process, *see* RFP Process, SEC Rule 613: Consolidated Audit Trail (CAT), *available at http://catnmsplan.com/process/* (last visited November 19, 2015).

[1153] *See supra* note 35.

[1154] *See* CAT NMS Plan, *supra* note 3, at Section 4.3(d), at Section 5.1(b).

[1155] *See id.* at Section 5.1(d).

remove the selected Plan Processor and introducing an alternative Plan Processor in the event of underperformance. As described below, the Commission preliminarily believes that the Plan provides the selected Plan Processor with competitive incentives because the Plan contains defined procedures for monitoring and removing the Plan Processor for failure to perform functions adequately or otherwise. However, the ease with which the Operating Committee could remove the Plan Processor and the costs of switching to another Plan Processor could limit these competitive incentives.

The Plan contains several provisions that would allow the Operating Committee to remove the Plan Processor.[1156] By Supermajority Vote, the Operating Committee could remove the Plan Processor for any reason. The Operating Committee may, by Majority Vote, remove the Plan Processor if it determines that the Plan Processor has failed to perform its functions "in a reasonably acceptable manner" or if the Plan Processor's expenses "have become excessive or are not justified." The consideration of such poor performance or excessive expenses would include (1) responsiveness to requests for technological changes or enhancements, (2) results of assessments performed pursuant to Section 6.6 of the Plan, (3) staying up-to-date on reliability and security of operations, (4) compliance with the requirements of Appendix D, and (5) other factors the Operating Committee may determine to be appropriate.

The Commission preliminarily believes that the ability of the Operating Committee to remove the Plan Processor for poor performance with only a Majority Vote incentivizes the Plan Processor to perform well enough to avoid being removed. The Commission further preliminarily believes that the performance of the Plan Processor would depend significantly on strong oversight by the Operating Committee.[1157]

The Commission recognizes that the effort required to remove a Plan Processor could be significant, which would limit the incentives of the Plan Processor to perform well. To subject a removal to a Majority Vote, the Operating Committee would presumably need to demonstrate the Plan Processor's performance and determine that it was not "reasonably acceptable." If not, the removal would be subject to Supermajority Vote, which could also take significant effort and a removal would be less likely to pass.

In addition, significant switching costs could influence whether removing a Plan Processor despite poor performance makes economic sense. In other words, the Operating Committee could wait for significant performance issues before initiating a vote to remove the Plan Processor. Additionally, before removing a Plan Processor, the Operating Committee would need to select a new Plan Processor. This would likely be a lengthy process taking significant time and effort by the Operating Committee. Moreover, switching Plan Processors could entail a complete rebuild of the Central Repository and significant implementation costs for CAT Reporters and Participants, potentially amounting to the initial implementation costs of the Plan. These costs would be higher if the Plan Processor's solutions include proprietary technologies that no other potential replacement (competitor) could supply. The costs would be lower if the new Plan Processor could implement the existing Technical Specifications. The benefits of switching could also depend on the benefits from technological advancements that these competitors could supply. In light of these costs, the competitive incentives of the Plan Processor to maintain top performance could be limited. Specifically, the Plan Processor may only need to perform well enough to keep the inefficiencies associated with their performance from exceeding the cost to switch to another Plan Processor. Despite the limitations on competitive incentives due to switching costs, however, the Commission preliminarily believes that the threat of replacement still provides an incentive to stay relatively current on technology advancements to avoid falling significantly behind potential competitors.

5. Request for Comment on Efficiency, Competition, and Capital Formation

The Commission requests comment on all aspects of the discussion of the effects of the CAT NMS Plan on efficiency, competition, and capital formation. In particular, the Commission seeks responses to the following questions:

347. The Participants state in the Plan that they believe the Plan would avoid disincentives such as placing an inappropriate burden on competition in the U.S. securities markets. In its analysis, the Commission concludes that competition is unlikely to be harmed to a degree that would affect investors. Do Commenters agree with the conclusions discussed in the Plan? Why or why not? Do Commenters agree with the Commission's conclusion regarding the Plan's impact on competition? Why or why not?

348. Do Commenters agree with the Commission's characterization of the relevant markets that the CAT NMS Plan affect? Why or why not? Do Commenters agree with the identified level of competition in each of the relevant markets in the Commission's analysis? Why or why not?

349. Do Commenters agree with the Commission's discussion of the Baseline for the market for trading services? Why or why not?

350. Do Commenters agree with the Commission's analysis of competition in the market for trading services under the Plan? Why or why not?

351. Do Commenters agree with the Commission's analysis of effects of the Plan's funding model on competition? Why or why not? Would the funding model as outlined in the Plan affect competition in the market for trading services between exchanges and ATSs? If so, how? Do Commenters agree with the Commission's analysis of the effects on competition of the Plan's allocation of CAT fees across market participants? Why or why not? Would the Participation Fee outlined in the Plan serve as a barrier to entry for ATSs that might otherwise register as exchanges? Why or why not?

352. Do Commenters believe that the allocation of voting rights among the Participants may serve to affect competition between Participants that operate options exchanges and those that do not? Why? Do governance provisions outlined in the Plan provide controls that could prevent burdens on competition due to the allocation of voting rights among Participants? If not, are there controls that could achieve this?

353. Do Commenters believe that the allocation of voting rights among the Participants may serve to affect competition between exchanges and ATSs in the market for trading services? Why or why not?

354. Do Commenters agree with the Commission's analysis of the effects on competition of costs of compliance with the Plan? Why or why not?

355. Do Commenters agree with the Commission's analysis of the effects on competition of the Plan's enhanced surveillance and deterrence? Why or why not?

356. Do Commenters agree with the Commission's analysis of the Baseline

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[1156] *See* CAT NMS Plan, *supra* note 3, at Section 6.1(q), (r), (s).

[1157] *See* Section IV.E.3.d, *supra*, for a discussion of the incentives of the Operating Committee in overseeing the Plan Processor.

for competition in the market for broker-dealer services? Why or why not?

357. Do Commenters agree with the Commission's analysis of the effects on competition in the market for broker-dealer services of the Plan? Why or why not? Are these effects different for smaller broker-dealers? How? How significant are these impacts?

358. Do Commenters agree with the Commission's analysis of the competition to be Plan Processor? Why or why not?

359. Do Commenters believe that any elements of the CAT NMS Plan may affect competition among the bidders? Do Commenters believe that any decisions by the Operating Committee that are allowable or likely under the proposed Plan may affect competition among the bidders in the market to be Plan Processor? If so, how would these competitive dynamics affect CAT as outlined in the Plan?

360. Do Commenters agree with the Commission's analysis of competition in the market to be Plan Processor post-selection? Why or why not?

361. Do Commenters agree with the Commission's analysis of the Baseline for competition in the market for regulatory services? Why or why not?

362. Do Commenters agree with the Commission's analysis of competition in the market for regulatory services of the Plan? Why or why not?

363. Do Commenters agree with the Commission's analysis of the Baseline for competition in the market for data reporting services? Why or why not? Do Commenters believe that capacity constraints in this market may affect broker-dealers' ability to comply with data reporting requirements under the Plan?

364. Do Commenters agree with the Commission's analysis of competition in the market for data reporting services under the Plan? Why or why not?

365. If some or all of the Participants decide to share the Raw Data they collect pursuant to the CAT NMS Plan and use the combined data for commercial purposes, how do Commenters believe that might affect competition in the markets described above?

366. In the Plan, the Participants state that they believe the Plan would have a net positive effect on efficiency. The Commission's analysis states that the Commission preliminarily believes the Plan would have a significant positive effect on efficiency. Do Commenters agree with the conclusions stated in the Plan? Why or why not? Do Commenters agree with the Commission's analysis? Why or why not?

367. Do Commenters agree that costs related to the Plan's requirements for data mapping, data dictionary creation, and encryption associated with the transmission of PII would not significantly affect efficiency? Why or why not?

368. Do Commenters agree with the Commission's analysis of the Plan's effects on the efficiency of market regulation and oversight? Why or why not?

369. Do Commenters agree with the Commission's analysis of the Plan's effects on market efficiency due to reductions in violative behavior? Why or why not?

370. Do Commenters agree with the Commission's analysis of the Plan's effect on efficiency related to reductions in ad hoc data requests from regulators? Why or why not?

371. Do Commenters agree with the Commission's analysis of the Plan's effect on efficiency due to reductions in duplicative reporting systems? Why or why not?

372. Do Commenters believe that the period of duplicative reporting that would precede the retirement of certain current, anticipated to be retired, regulatory reporting systems would significantly affect efficiency? Why or why not?

373. Do Commenters agree with the Commission's analysis of inefficiencies related to the funding model? Why or why not?

374. Do Commenters agree with the Commission's analysis of the likelihood of CAT fees being passed on to investors under the Plan? Why or why not?

375. Do Commenters agree with the Commission's analysis of the efficiency of Plan operations? Why or why not?

376. Do Commenters agree with the Commission's analysis of the effects of voting thresholds for Operating Committee decisions on efficiency? Why or why not?

377. Do Commenters agree with the Commission's analysis of the Advisory Committee's effect on efficiency under the Plan? Why or why not?

378. Do Commenters agree with the Commission's analysis of the effects on efficiency of the Participants' decision to specify or not specify certain aspects of CAT in the RFP? Why or why not?

379. Do Commenters believe that the CAT NMS Plan would impact investor confidence? If so, how? Do investors currently lack confidence because of the current state of regulatory data? Would the expected improvements to investor protection result in increased investor confidence? Please explain. What would be the expected effects of changes in investor confidence on allocative efficiency and capital formation? What would be the magnitude of the economic effects from expected changes to investor confidence? Please provide analysis.

380. The Plan states that the Participants believe that the Plan would have no deleterious effect on capital formation. Do Commenters agree with the Participants' conclusions stated in the Plan? Do Commenters agree with the Commission's preliminary belief that the Plan would not have a deleterious effect on capital formation? Why or why not?

381. Do Commenters agree with the Commission's analysis of the Plan's effects on capital formation due to enhanced market surveillance and regulatory activities? Why or why not?

382. Do Commenters agree with the Commission's analysis of effects on capital formation due to data security provisions of the Plan? Why or why not?

H. Alternatives

As a part of its economic analysis, the Commission is considering and soliciting comment on alternatives to certain approaches or elements of the CAT NMS Plan. The Commission analyzes alternatives that could have a direct and significant impact on costs or benefits deriving from at least one of the four data qualities discussed above: accuracy, completeness, accessibility, and timeliness. While the discussed alternatives are not the only alternatives that could significantly impact costs, benefits, or data quality, they are an attempt to identify reasonable options. Each has the potential to alter the Commission's preliminary conclusions regarding the economic effects of the CAT NMS Plan.

The analysis of alternatives is divided into three categories. First, the Commission analyzes alternatives to the approaches the Exemption Order permitted the Participants to include in the Plan.[1158] As noted in the Exemption Order, the Commission was persuaded to grant exemptive relief to provide flexibility such that the proposed approaches described in the Exemption Request can be included in the CAT NMS Plan and subject to notice and comment.[1159] Second, the Commission analyzes alternatives to certain specific approaches in the CAT NMS Plan, including alternative approaches to clock synchronization, time stamps, Error Rates, error correction timelines, the funding model, listing exchange symbology, data accessibility standards, and the intake capacity levels. Third, the Commission analyzes alternatives to the scope of certain specific elements of the Plan. Specifically, the Commission analyzes the impact of changing the scope of the CAT to exclude certain data fields. The Commission also analyzes alternatives to exclude OTC Equity Securities and the requirement to periodically refresh all customer information. Finally, the Commission solicits comment on the broad alternative of modifying OATS and/or another existing system to meet the requirements of Rule 613 instead of approving the Plan.

[1158] *See* Exemption Order, *supra* note 18.

[1159] *Id.*

1. Alternatives to the Approaches the Exemption Order Permitted To Be Included in the Plan

The Commission is soliciting additional comment on alternatives to the approaches the Exemption Order permitted the SROs to include in the CAT NMS Plan.[1160] Specifically, the Commission is soliciting comment on how the following alternatives (the "Rule 613 approach"), described in further detail below, would affect the costs and benefits of the CAT: (a) Requiring both Options Market Makers and Options Exchanges to report Options Market Maker quotations to the Central Repository, (b) requiring CAT Reporters to report a Customer-ID for each Customer upon the original receipt or origination of an order, (c) requiring CAT Reporters to report a universal CAT-Reporter-ID to the Central Repository for orders and certain Reportable Events, (d) requiring the reporting of the account number for any subaccount to which an execution is allocated, and (e) requiring that Manual Order Events be reported with a time stamp granularity of one millisecond.

a. Options Market Maker Quotes

The Commission is soliciting comment on how an alternative approach—the Rule 613 approach—to the reporting of Options Market Maker quotations might impact the costs and benefits of the Plan. Rule 613(c)(7) provides that the CAT NMS Plan must require each national securities exchange, national securities association, and any member of such exchange or association to record and electronically report to the Central Repository details for each order and each Reportable Event, including the routing and modification or cancellation of an order.[1161] Rule 613(j)(8) defines "order" to include "any bid or offer" so that the details for each Options Market Maker quotation must be reported to the Central Repository by both the Options Market Maker and the exchange to which it routes its quote.[1162] The SROs requested an exemption from Rules 613(c)(7)(ii) and (iv) and proposed an approach whereby only Options Exchanges—but not Options Market Makers—would be required to report information to the Central Repository regarding Options Market Maker quotations.[1163] The Commission granted exemptive relief to the SROs to allow the approach to collecting Options Market Maker quotations described in the Exemption Request to be included in the CAT NMS Plan and subject to notice and comment.[1164]

Pursuant to the exemptive relief granted by the Commission, the CAT NMS Plan provides that only Options Exchanges—but not Options Market Makers—would be required to report information to the Central Repository regarding Options Market Maker quotations.[1165] On the other hand, the Rule 613 approach would require that each Options Market Maker quotation be reported to the Central Repository by both the Options Market Maker and the exchange to which it routes its quote. The Commission preliminarily believes that the Rule 613 approach would increase certain costs associated with the implementation and operation of CAT as compared to the Plan as filed without providing any additional material information.

Under the Rule 613 approach, the reports from the Options Exchanges would be virtually identical to the reports coming from the Options Market Makers, with the exception that reports from the Options Market Makers would indicate the time that the Options Market Maker routes its quote, or any modification or cancellation thereof, to the exchange ("Quote Sent Time"). However, to ensure that regulators would receive all of the information contemplated by Rule 613(c)(7), the CAT NMS Plan requires that (1) Options Market Makers report to the relevant Options Exchange the Quote Sent Time along with any quotation, or any modification or cancellation thereof; and (2) Options Exchanges submit the quotation data received from Options Market Makers, including the Quote Sent Time, to the Central Repository without change.[1166] Under the CAT NMS Plan, therefore, regulators would have access to all the material information in CAT that would be provided under the Rule 613 approach. As such, the Commission preliminarily does not believe that there would be any additional benefits to using the Rule 613 approach.

Furthermore, the CAT NMS Plan estimates that the Rule 613 approach would increase the amount of records that must be handled by the Central Repository by 18 billion records per day, at an additional cost of between $2 million and $16 million for data storage and technical infrastructure over a five year period.[1167] A cost survey estimates the Rule 613 approach would cost all Options Market Makers between $307.6 million and $382 million over five years.[1168] Under the approach taken in the CAT NMS Plan, these costs would be avoided but the Options Market Makers surveyed would spend approximately $8.5 million to send Quote Sent Times to the exchanges and all Options Market Makers would spend $36.9M to $76.8M.[1169] In aggregate, the estimates provided suggest that the Rule 613 approach would add between $230.80 million and $345.10 million to industry costs over five years.[1170] The Exemption Request also notes that the additional costs would be disproportionately borne by smaller broker-dealers relative to their market share.[1171]

The Commission notes that there are limitations to the cost estimation methodology presented in the Exemption Request. These limitations include the lack of quantified cost estimates for additional indirect cost savings associated with the exemption. However, the Commission preliminarily believes that the Rule 613 approach would increase certain costs associated with the implementation and operation of CAT as compared to the Plan as filed without providing any additional material information.

[1160] *Id.*

[1161] *See* 17 CFR 242.613(c)(7).

[1162] *See* 17 CFR 242.613(j)(8).

[1163] *See* Exemptive Request Letter, *supra* note 16, at 2–5.

[1164] *See* Exemption Order, *supra* note 18.

[1165] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Background Section.

[1166] *Id.* at Section 6.4(d)(iii).

[1167] *Id.* at Appendix C, Section B.7(b)(iv)(B).

[1168] *See* FIF, SIFMA, and Security Traders Association, Cost Survey Report on CAT Reporting of Options Quotes by Market Makers (November 5, 2013), *available at http://www.catnmsplan.com/industryfeedback/p601771.pdf*; *see also* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iv)(B).

[1169] *See* FIF, SIFMA, and Security Traders Association, Cost Survey Report on CAT Reporting of Options Quotes by Market Makers 3–4 (November 5, 2013), *available at http://www.catnmsplan.com/industryfeedback/p601771.pdf.*

[1170] To be conservative, the Commission estimates the lower end of the range to be the lower cost to comply with a CAT NMS Plan without the exemption minus the higher cost to comply with a CAT NMS Plan with the exemption ($230.8M = $307.6 − $76.8M). Likewise, the higher end of the range is the higher cost to comply with a CAT NMS Plan without the exemption minus the lower cost to comply with a CAT NMS Plan with the exemption ($345.1M = $382M − $36.9M).

[1171] *See* Exemptive Request Letter, *supra* note 16, at 7.

b. Customer-ID

The Commission is soliciting comment on how an alternative approach—the Rule 613 approach—to the reporting of customer information might impact the costs and benefits of the Plan. Rule 613(c)(7)(i)(A) requires that for the original receipt or origination of an order, a CAT Reporter report the "Customer-ID(s) for each Customer." [1172] "Customer-ID" is defined in Rule 613(j)(5) to mean "with respect to a customer, a code that uniquely and consistently identifies such customer for purposes of providing data to the central repository." [1173] Rule 613(c)(8) further requires that "[a]ll plan sponsors and their members shall use the same Customer-ID and CAT-Reporter-ID for each customer and broker-dealer." [1174] The SROs requested an exemption from the requirements in Rule 613(c)(7)(i)(A) and Rule 613(c)(8), and proposed an approach whereby each broker-dealer would assign a unique Firm Designated ID to each trading account, which would be linked to a set of identifying information (the "Customer Information Approach").[1175] Using the Firm Designated ID and the other information identifying the Customer that would be reported to the Central Repository, the Plan Processor would then assign a unique Customer-ID to each Customer. Upon original receipt or origination of an order, broker-dealers would only be required to report the Firm Designated ID on each new order, rather than using the Customer-ID. The Commission granted exemptive relief to the SROs to allow the alternative approach to Customer-IDs described in the Exemption Request to be included in the CAT NMS Plan and subject to notice and comment.[1176]

Pursuant to the exemptive relief granted by the Commission, the CAT NMS Plan provides for the use of the Customer Information Approach.[1177] The Commission is soliciting comment on the Rule 613 approach, which would require that broker-dealers report Customer information using a consistent, unique Customer-ID, as set out in in Rule 613(c)(7)(i)(A) and Rule 613(c)(8). The Commission preliminarily believes that the Rule 613 approach would increase certain costs associated with the implementation and operation of CAT as compared to the Customer Information Approach while providing substantially identical data.

The Commission also preliminarily believes that the Rule 613 approach would have no significant impact on the benefits of the CAT NMS Plan. The Participants maintain that, under the Rule 613 approach, there would be no gains in terms of accuracy or reliability, no effect on the ability to link records, and no effect on the time the data would be made available to regulators, as compared to the Customer Information Approach.[1178] The Participants also believe that there may be accuracy gains under the Customer Information Approach if it reduces errors that may otherwise occur if broker-dealers must adapt their systems and business processes to manage Customer-IDs.[1179]

The Commission also preliminarily believes that the Rule 613 approach would increase the costs of the CAT NMS Plan. In their Exemption Request, the Participants discussed a number of reasons why the Customer Information Approach is less burdensome than the Rule 613 approach. First, it reduces the CAT implementation burden on market participants by eliminating the need for changes to their current customer identification systems.[1180] Currently, market participants have individual formats for their customer identifiers; under the Customer Information Approach, no standardization of form would be required. Second, the Customer Information Approach eliminates the need for centrally-assigned Customer-IDs to be assigned at the Central Repository and communicated back to market participants.[1181] Third, it allows the Plan Processor to implement modifications and technical upgrades to the Customer-ID generation process and infrastructure without the involvement of CAT Reporters.[1182] Fourth, the Customer Information Approach eliminates the need to train CAT Reporters on the Customer-ID management process and provide related technical support. Fifth, it potentially reduces delays faced by investors opening new accounts, who might not be able to transact until the Central Repository has assigned a Customer-ID and communicated it to the broker-dealer representing the Customer.[1183]

Based on cost survey data provided by the Participants, the Rule 613 approach would increase quantifiable costs to the top three tiers of CAT Reporters by at least $195 million.[1184] The Commission notes that this likely underestimates the increased costs to all CAT Reporters because the Rule 613 approach would likely increase costs to CAT Reporters outside the top three tiers also. Furthermore, the Bidders have indicated that the costs of building and operating the Central Repository under the Rule 613 approach would not be lower than the costs of the Customer Information Approach.[1185] The Commission therefore preliminarily believes that the Rule 613 approach would increase the costs of the CAT NMS Plan relative to the Plan's Customer Information Approach, while providing substantially identical data.

c. CAT-Reporter-ID

The Commission is soliciting comment on how an alternative approach—the Rule 613 approach—to the reporting of CAT Reporter information might impact the costs and benefits of the Plan. A CAT-Reporter-ID is "a code that uniquely and consistently identifies [a CAT Reporter] for purposes of providing data to the central repository." [1186] Subparagraphs (c)(7)(i)(C), (ii)(D), (ii)(E), (iii)(D), (iii)(E), (iv)(F), (v)(F), (vi)(B), and (c)(8) of Rule 613 provide that the CAT NMS Plan must require CAT Reporters to report CAT-Reporter-IDs to the Central Repository for orders and certain Reportable Events.[1187] Additionally, Rule 613(c)(8) requires that CAT Reporters use the same CAT-Reporter-ID for each broker-dealer.[1188] To leverage existing infrastructure and business processes, the Participants requested an exemption from Rule 613(c)(7) and (c)(8) to allow a different approach to be included in the Plan; CAT Reporters would report existing SRO-assigned market participant identifiers when submitting data to the Central Repository ("SRO-Assigned Market Participant Identifiers").[1189] The Central Repository would then generate a corresponding CAT-Reporter-ID for internal use to identify CAT Reporters.

[1172] *See* 17 CFR 242.613(c)(7)(i)(A).

[1173] *See* 17 CFR 242.613(j)(5).

[1174] *See* 17 CFR 242.613(c)(8).

[1175] *See* Exemptive Request Letter, *supra* note 16, at 9. Because the Plan Processor would still assign a Customer-ID to each Customer under the Customer Information Approach, the SROs did not request an exemption from Rule 613(j)(5).

[1176] *See* Exemption Order, *supra* note 18, at 11863.

[1177] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a)(iii).

[1178] *See* Exemptive Request Letter, *supra* note 16, at 15–18.

[1179] *Id.*

[1180] *See id.* at 17.

[1181] *See id.*

[1182] *See id.*

[1183] *See id.* at 16–17.

[1184] *Id.* at 17–18.

[1185] *Id.* at 17.

[1186] 17 CFR 242.613(j)(2).

[1187] 17 CFR 242.613(c)(7)(i)(C), (ii)(D), (ii)(E), (iii)(D), (iii)(E), (iv)(F), (v)(F), (vi)(B), and (c)(8).

[1188] 17 CFR 242.613(c)(8).

[1189] *See* Exemptive Request Letter, *supra* note 16, at 19.

This approach—called the "Existing Identifier Approach"—allows the CAT-Reporter-IDs to be managed at the Central Repository by the Plan Processor without the involvement of the Reporters.[1190] The Commission granted exemptive relief to the SROs to allow the Existing Identifier Approach to be included in the CAT NMS Plan and subject to notice and comment.[1191]

Pursuant to the exemptive relief granted by the Commission, the CAT NMS Plan provides for the use of the Existing Identifier Approach.[1192] The Commission is soliciting additional comment on the Rule 613 approach, which would require that CAT Reporters use a consistent, unique CAT-Reporter-ID, as set out in in Rule 613(c)(7) and Rule 613(c)(8). The Commission preliminarily believes that the Rule 613 approach would increase certain costs associated with the implementation and operation of CAT as compared to the Existing Identifier Approach while providing substantially identical data.

The Commission preliminarily believes that the Rule 613 approach would not result in more reliable or accurate data as compared to the Existing Identifier Approach. The Exemption Request states that "the proposed approach would not compromise the goal of Rule 613 to record and link Reportable Events to the CAT Reporter associated with the event." [1193] The processed CAT Data would contain the CAT-Reporter-ID fields, and the Participants maintain that there would be no loss of accuracy or reliability, no effect on the ability to link records, and no effect on the time the data would be made available to regulators.[1194]

In fact, the Commission preliminarily believes that the Rule 613 approach would reduce the quality of data obtained as compared to the Existing Identifier Approach. Specifically, the Rule 613 approach would reduce the granularity of information on departments, trading desks, and other business units within CAT Reporters, which would be captured under the Existing Identifier Approach. This additional granularity would be possible under the Existing Identifier Approach because identifiers currently in use are often assigned to entities that are defined more granularly than the CAT-Reporter-ID level. The Commission also preliminarily believes that the ability to leverage existing infrastructure and business processes may reduce the potential for delays and errors that could be associated with requiring CAT Reporters to modify their systems and workflows to handle the CAT-Reporter-IDs.

The Commission preliminarily believes that the Rule 613 approach would increase the costs of the CAT NMS Plan relative to the Existing Identifier Approach. The Participants estimate implementation costs for the top three tiers of CAT Reporters for the Rule 613 approach of $78 to $244 million, depending on how report types have to use the CAT-Reporter-IDs.[1195] The Exemption Request does not compare these costs to the Existing Identifier Approach allowed by the exemption and included in the Plan.[1196] The Participants note that these estimates are conservative because they are based on only 11% of broker-dealers.[1197] The Participants indicated that they have consulted with the bidders and the industry in compiling this analysis.[1198]

While the Commission preliminarily believes that the Rule 613 approach would increase certain costs associated with the implementation and operation of CAT as compared to the Existing Identifier Approach, the Commission notes that there are limitations associated with the cost estimation methodology presented in the Exemption Request. These limitations include the exclusion of SROs and smaller CAT Reporters from the survey, no apparent differentiation between initial, deferred, and recurring costs, and lack of support for the method used to extrapolate the estimates for large broker-dealers to the industry. Nor do the cost estimates address the broker-dealers who would be CAT Reporters but are currently not OATS reporters, including those that are currently not registered with FINRA, which may have a very different cost structure. However, it is likely that the dominant effect would be the exclusion of many CAT Reporters from the cost estimates, which would tend to underestimate the cost increases. The Commission currently has no data from which it can independently estimate the cost differential because it depends on information internal to each of a heterogeneous group of CAT Reporters, which is not compiled or stored anywhere and to which the Commission therefore does not have ready access. The Commission believes that these effects are not likely to alter its preliminary conclusion that the Rule 613 approach would significantly increase the costs of the CAT NMS Plan as compared to the Plan's Existing Identifier Approach. The Commission is requesting comment on this preliminary conclusion and any additional data Commenters believe should be considered.

d. Linking Order Executions to Allocations

The Commission is soliciting comment on how an alternative approach to the reporting of allocation information—the Rule 613 approach—might impact the costs and benefits of the Plan. Rule 613(c)(7)(vi)(A) requires each CAT Reporter to record and report to the Central Repository "the account number for any subaccounts to which the execution is allocated (in whole or part)." [1199] This information would allow regulators to link the subaccount to which an allocation was made to the original order placed and its execution. In the Exemptive Request Letter and April 2015 Supplement, the SROs requested an exemption from Rule 613(c)(7)(vi)(A) to include in the Plan an approach whereby CAT Reporters would instead submit information to the Central Repository that would allow regulators to link subaccount information to the Customer that submitted the original order.[1200] The Commission granted exemptive relief to the SROs to allow this approach to be included in the CAT NMS Plan and subject to notice and comment.[1201]

Pursuant to the exemptive relief granted by the Commission, the CAT NMS Plan provides that, rather than providing the account number for any subaccounts to which the execution is allocated, CAT Reporters would submit information to the Central Repository in the form of an Allocation Report, in order to allow regulators to link subaccount information to the Customer that submitted the original order.[1202] The Allocation Report would include the Firm Designated ID for any account(s), including subaccount(s), to which executed shares are allocated, and provide the security that has been allocated, the identifier of the firm reporting the allocation, the price per share of shares allocated, the side of shares allocated, the number of shares allocated to each account, and the time of the allocation, which is information that is not currently required to be reported and/or retained by broker-dealers.[1203] There would not be a direct link in the Central Repository between the subaccounts to which an execution is allocated and the execution itself. However, CAT Reporters would be required to report each allocation to the Central Repository on an Allocation Report, and the Firm Designated ID of the relevant subaccount provided to the Central Repository as part of the Allocation Report could be used by the Central Repository to link the subaccount holder to those with authority to trade on behalf of the account.[1204] Further, the Allocation Reports used in conjunction with order lifecycle information in CAT would assist regulators in identifying, through additional investigation, the probable group of orders that led to allocations.[1205]

[1190] *Id.*

[1191] *See* Exemption Order, *supra* note 18, at 11866.

[1192] *See, e.g.,* CAT NMS Plan, *supra* note 3, at Sections 6.3(d) and (e), 6.4(d).

[1193] *See* Exemptive Request Letter, *supra* note 16, at 21.

[1194] *Id.* at 22–23.

[1195] *Id.* at 24.

[1196] *Id.* at 24.

[1197] *Id.* at 25.

[1198] *Id.* at 22.

[1199] *See* 17 CFR 242.613(c)(7)(vi)(A).

[1200] *See* Exemptive Request Letter, *supra* note 16, at 28–29; April 2015 Supplement, *supra* note 16, at 2.

[1201] *See* Exemption Order, *supra* note 18, at 11868.

[1202] *See* CAT NMS Plan, *supra* note 3, at Section 6.4(d)(ii)(A)(1).

The Commission is soliciting comment on the Rule 613 approach, which would require CAT Reporters to record and report the account number for any subaccounts to which the execution is allocated, as described above. The Commission preliminarily believes that that the Rule 613 approach could provide the Central Repository with a way to link allocations to order lifecycles.[1206] This linkage would not be available under the current approach. However, based on estimates provided by the Participants, the Commission preliminarily believes that the Rule 613 approach would increase certain costs associated with the implementation and operation of CAT as compared to the Plan as filed by roughly $525 million.[1207]

The Commission preliminarily believes that either approach would allow regulators to link specific allocations, and the prices received on those allocations, with the aggregated executions that resulted in the allocations and their execution prices. Industry feedback received by the Participants indicates that existing business practices typically involve aggregating executions in an average price account before making allocations, and forcing a precise matching between orders and executions ex-post would be misleading.[1208] The Exemption Request maintains that, under the approach in the Plan, there would be no loss of accuracy or reliability, no effect on the ability to link order records, and no effect on the time the data would be made available to regulators as compared to the Rule 613 approach.[1209] The Exemption Request also states that there may be accuracy and reliability gains if the exemption reduces errors that may otherwise occur if broker-dealers were required to re-engineer their allocation handling systems and business processes to meet the requirements of Rule 613.[1210] However, the Rule 613 approach would provide regulators access to allocations linked to specific disaggregated orders, which is not possible under the approach in the Plan. The Exemption Request notes that linking particular allocations to particular order lifecycles would be inaccurate in some circumstances, such as when many orders are allocated to many customers.[1211] The Commission is soliciting comment on whether such information would necessarily be inaccurate, and whether requiring the linking of allocations to order lifecycles would reduce accuracy for several reasons. First, in cases in which one order is allocated to one customer, the Rule 613 approach would provide an improvement in accuracy over the approach proposed in the CAT NMS Plan because the Rule 613 approach would allow the Central Repository to accurately link such allocations to order lifecycles whereas the approach proposed in the CAT NMS Plan might not. Under the CAT NMS Plan, for regulators to link the allocations to the order lifecycles, they would need to construct an algorithm that would rely on less information than the Central Repository would have under the Rule 613 approach. As a result, these regulator linkages would likely be less accurate than a Central Repository linkage. The Commission preliminarily believes that this is true for cases in which one order is allocated to many customers and when many orders are linked to one customer. For the many-to-many allocations, in which many customer orders are grouped and worked by the market participant using many orders to acquire the aggregate position ultimately used to fill the customer orders, the Commission notes that broker-dealers likely already maintain records that allow them to ensure that the allocations receive fair prices based on market executions. The Commission is soliciting comment on whether such information might be sufficient to link the many allocations to the many orders executed in an accurate manner. Such information would greatly aid investigations of fair allocations because it would allow regulators to reconstruct the manner in which allocations occur.

The Commission preliminarily believes that the Rule 613 approach would increase the costs of compliance with the CAT NMS Plan. According to industry feedback collected by the Participants, the Rule 613 approach would require broker-dealers to undertake a major re-engineering of their middle and back office systems and processes.[1212] The Participants estimate a reduction in implementation cost over the Rule 613(c)(7)(vi) Baseline for the top three tiers of CAT Reporters of $525 million; consequently, the Commission preliminarily believes that this alternative would cost at least $525 million more than the estimated costs of the CAT NMS Plan to implement.[1213] The Participants indicated that they have consulted with the bidders and the industry in compiling this analysis.[1214]

e. Time Stamp Granularity

The Commission is soliciting comment on how an alternative approach—the Rule 613 approach—to time stamps on "Manual Order Events" might impact the costs and benefits of the Plan.[1215] Rule 613(c)(7) and Rule 613(d)(3) require time stamps with a minimum granularity of one millisecond on all order events.[1216] The Participants requested an exemption from the requirement in Rule 613(d)(3) that for Manual Order Events each CAT Reporter record and report details for Reportable Events with time stamps that "reflect current industry standards and [are] at least to the millisecond."[1217] The Commission granted exemptive relief to the SROs to allow the approach to recording and reporting time stamps for Manual Order Events described in the Exemption Request to be included in the CAT NMS Plan and subject to notice and comment.[1218]

[1203] *See id.* at Section 1.1; *see also* Exemption Order, *supra* note 18, at 44–45.

[1204] *See* Exemption Order, *supra* note 18, at 45.

[1205] *Id.*

[1206] In the Exemption Request, the SROs explained that under the Rule 613 approach allocations made from an average price account would not reflect a true one-to-one relationship between an execution and an allocation, and therefore the information provided would not directly link a single order execution and the subaccount to which an allocation was made. *See* Exemptive Request Letter, *supra* note 16, at 28. However, the Commission believes that under the Rule 613 approach, regulators would receive information that would identify each execution resulting from the original order placed, as well as the identity of all the subaccounts to which those executions were allocated. This information would provide regulators a finite list of executions from which the subaccount allocations could have been made.

[1207] The Participants estimate that the Plan's approach to allocation information would result in a reduction in implementation cost for the top three tiers of CAT Reporters of $525 million as compared to the Rule 613 approach. *See* Exemptive Request Letter, *supra* note 16, at 31.

[1208] *See* Exemptive Request Letter, *supra* note 16, at 28 ("[T]his approach . . . introduces an artificial relationship between any one execution and one allocation. . . . Although, . . . the ultimate allocation of the shares executed that result from [an] aggregated order may be useful for regulatory surveillance purposes, tying these allocations to multiple different executions is of little regulatory benefit.").

[1209] *Id.* at 30.

[1210] *Id.*

[1211] *See id.* at 28–30.

[1212] *Id.* at 27.

[1213] *Id.* at 31.

[1214] *See id.* at 30–31.

Pursuant to the exemptive relief granted by the Commission, the CAT NMS Plan provides that: (1) Each CAT Reporter would record and report Manual Order Event time stamps to the second; (2) Manual Order Events would be identified as such when reported to the CAT; and (3) CAT Reporters would report in millisecond time stamp increments when a Manual Order Event is captured electronically in the relevant order handling and execution system of the CAT Reporter ("Electronic Capture Time").[1219] On the other hand, the Rule 613 approach would require that CAT Reporters record and report details for Manual Order Events with time stamps that are at least to the millisecond, as required by Rule 613(c)(7) and Rule 613(d)(3). The Commission preliminarily believes that the Rule 613 approach would increase the costs of implementing the CAT NMS Plan while providing little regulatory benefit relative to the current approach.

The Participants maintain in the Exemption Request that there would be little benefit, and possibly some adverse consequences, of capturing Manual Order Event time stamps in milliseconds.[1220] They note that determining the time of a manual event is inherently imprecise, due to the limits of human reaction time in completing a transaction and the time required to manually record the event.[1221] They claim human reaction time to visual stimulus is on the order of 400–500 milliseconds, making millisecond time stamps imprecise.[1222] The Commission preliminarily agrees that attempting to record the precise millisecond in which a manual event occurred would necessarily be imprecise. The Commission also preliminarily agrees that potential adverse consequences could arise from relying on time stamps with a misleading level of precision.[1223]

The Participants discussed the costs and benefits of the proposed exemption in their Exemption Request. They estimated a minimum total cost to the industry of $10.5 million based on the cost of advanced OATS-compliant clocks with granularity of one second, and noted that clocks with millisecond granularity would likely be more expensive if available.[1224] The Participants also noted that the industry was consulted through the DAG and an unsuccessful attempt was made to find a commercially available time stamping device with millisecond granularity.[1225] Based on this information, the Commission preliminarily believes the Rule 613 approach to Manual Order Events would increase certain costs associated with the implementation and operation of CAT as compared to the Plan as filed without providing any significant additional benefit.

2. Alternatives to Certain Specific Approaches in the CAT NMS Plan

The Commission has analyzed alternatives to specific approaches in the CAT NMS Plan with respect to clock synchronization, time stamps, error rates, the time within which errors must be corrected, the funding model, requirements regarding listing exchange symbology, data accessibility standards, and intake capacity levels.

a. Clock Synchronization

The Commission is soliciting comments on alternate approaches to clock synchronization as compared to those proposed in the CAT NMS Plan. First, the Commission is soliciting comment on alternatives to the Plan's one-size-fits-all definition of "industry standard." Under these alternatives, "industry standard" would be defined in terms of the standard practices of different segments of the CAT Reporters, or by looking at information other than current industry practices. These alternative approaches could result in clock offset tolerances shorter than the CAT NMS Plan's proposed 50 millisecond standard for some or all CAT Reporters. The Commission preliminarily believes that these alternatives could substantially increase the benefits of CAT in regulatory activities that require event sequencing, such as analysis and reconstruction of market events, as well as market analysis and research in support of policy decisions, and cross-market surveillance, examinations, investigations, and other enforcement functions.[1226]

Second, the Commission is soliciting comment on two additional alternatives that could allow for more cost-effective clock synchronization standards. In particular, the Commission is soliciting comment on modifying the requirement to document clock synchronization activities such that only events that require clock adjustment would be required to be documented, and modifying the clock synchronization requirement such that clocks would not have to be synchronized at times when systems are not recording time-sensitive CAT Reportable Events, such as orders originated outside of market hours when they are not immediately actionable. The Commission preliminarily believes that reduced clock synchronization logging requirements might significantly reduce ongoing costs associated with clock synchronization compliance as compared to the Plan as filed, without losing any additional material information. In addition, the Commission preliminarily believes that more flexible clock synchronization standards outside of regular and extended trading hours may also reduce costs without a material loss to the ability of regulators to sequence order events as compared to the Plan as filed, without losing any additional material information. Each of these alternatives is outlined below.

(1) Alternative Clock Synchronization Standards

Rule 613(d)(1) requires synchronization of business clocks for the purposes of recording the date and time of Reportable Events consistent

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[1215] "Manual Order Events" are defined to mean "non-electronic communication[s] of order-related information for which CAT Reporters must record and report the time of the event." *See* CAT NMS Plan, *supra* note 3, at Section 1.1.

[1216] *See* 17 CFR 242.613(c)(7) (requiring use of time stamps pursuant to 17 CFR 242.613(d)(3)); 17 CFR 242.613(d)(3) (requiring time stamp granularity be "at least to the millisecond").

[1217] *See* 17 CFR 242.613(d)(3); Exemptive Request Letter, *supra* note 16, at 32.

[1218] *See* Exemption Order, *supra* note 18, at 11869.

[1219] *See* CAT NMS Plan, *supra* note 3, at Section 6.8.

[1220] *See* Exemptive Request Letter, *supra* note 16, at 33.

[1221] *Id.* at 37.

[1222] *Id.*

[1223] The Commission notes that Manual Order Events are not clearly and exhaustively defined, and the definitions may not be available until the Technical Specifications are published. It may be possible for the Plan Processor to classify some types of order events as Manual Order Events that were not considered to be a Manual Order Event for the purposes of this analysis. This creates a degree of uncertainty as to whether the Rule 613 approach might yield some regulatory benefit.

[1224] *See* Exemptive Request Letter, *supra* note 16, at 36–37.

[1225] *Id.* at 35.

[1226] *See* Section IV.E.1.b(2), *supra*.

with industry standards.[1227] The CAT NMS Plan describes the "industry standard" in terms of the technology adopted by the majority in the industry.[1228] The Plan therefore bases its clock synchronization standard on current practices of the broker-dealer industry generally, and provides that one standard would apply to all CAT Reporters. The Commission is soliciting comment on an alternative interpretation of "industry standard" that would consider the standard practices of different segments of the CAT Reporters for the purposes of setting the clock synchronization requirements. The Commission is also soliciting comment on an alternative that would define industry standard by looking at information other than current industry practice; for example, the most accurate technology currently available in the industry, or the standard recommended by a particular authority or industry group.

First, the Commission is soliciting comment on an alternative definition of industry standard that would consider the standard practices of different segments of CAT Reporters. Under this alternative, all systems within market participants that process CAT-Reportable Events would be required to comply with a clock synchronization requirement reflecting an industry standard particular to that market participant's segment of the industry. Currently, the Commission lacks the information necessary to reach a preliminary conclusion regarding the appropriate industry standards for all subsets of the industry. Specifically, neither the FIF Clock Offset Survey nor the Plan provides comprehensive data on the clock synchronization practices of firms within each of the relevant subsets of the industry, and the Commission has no data from which it can independently estimate the cost differential because the Commission is not aware of any such data available to it at this time. However, the Commission is soliciting comment on this approach, which it believes would result in a clock offset tolerance of less than 50 milliseconds for some market participants. The Commission seeks comment on the current practices for clock synchronization in various segments of the industry, including but not limited to broker-dealers that are introducing firms, institutional firms, retail firms that accept customer orders electronically, registered market makers and principal trading firms, as well as service bureaus hosting order management systems, exchanges and ATSs, and branches of broker-dealers that predominantly handle manual orders. The Commission also seeks comment on the costs and benefits of requiring varying clock offset tolerances within the industry.

The Commission notes that the current practices for exchanges and Execution Venues may differ from the industry standard for broker-dealers as defined by the Plan, and current practices for certain systems within broker-dealers may vary by the system within the broker-dealers. For example, a small clock offset tolerance may be nearly universally adopted for systems like ATSs that operate a matching engine, while systems involved in manual entry of orders may typically have larger clock offset tolerances. By defining industry standard based on practices of the broker-dealer industry generally, the Plan does not account for these differences.

Other information now available for the Commission and the public to study, particularly information from the FIF Clock Offset Survey, shows that several of the survey respondents that have a current clock offset tolerance of one second are clearing firms or service bureaus.[1229] According to the same survey, current clock offset tolerances vary from one second to five microseconds among the broker-dealers surveyed with 22% of respondents having multiple clock offset tolerances across their systems.[1230] Further, the FIF Clock Offset Survey shows that the firms with multiple clock offset tolerances typically engage in multiple lines of business. The fact that some broker-dealers maintain clock offset tolerances at different levels within the firm suggests that these broker-dealers believe that clock precision is more important for some systems; furthermore, based on conversations with market participants,[1231] the Commission preliminarily believes that market participants strategically upgrade certain systems and reallocate older technology within the firm to applications where up-to-date technology is less critical.[1232]

Finally, exchanges and ATSs, as well as the SIPs, may have current clock offset tolerances that are significantly different from the clock offset tolerances at broker-dealers and could therefore achieve finer clock offset tolerances at lower cost than broker-dealers.[1233] According to FIF, all exchange matching engines meet a clock offset tolerance of 50 milliseconds or less while NASDAQ states that all exchanges that trade NASDAQ securities have clock offset tolerances of 100 microseconds or less.[1234] In conversations with Commission Staff, the Participants stated that absolute clock offset on exchanges averages 36 microseconds, further suggesting that certain business activities warrant smaller clock synchronization tolerances.[1235]

Given this information, the Commission recognizes the possibility that some business systems and some CAT Reporter types would rarely be responsible for recording the date and time of reportable events and also recognizes that the time stamp precision of such rare events might not be as critical as for other events. For example, a system that routes customer orders to market centers may be considered critical for sequencing market events, while a system that facilitates manual input of orders received by telephone may not. Conversely, the clock synchronization practices of some CAT Reporters may be more critical to the overall benefits of CAT or could be less costly to implement. For example, a service bureau that provides an order-handling system hosted on its own servers is likely to route orders for many market participants and its clock synchronization practices would, thus, be critical to event sequencing. On the other hand, the precision of time stamps from systems of an isolated broker-dealer that routes customer orders to its service bureau or another broker-dealer for market access and conducts no proprietary trading may be less critical to event sequencing, especially if the receiving system at the service bureau would record a high-precision time stamp when the order is received. Furthermore, instituting higher clock precision at a single service bureau would be less costly than instituting that same level of clock precision at the service bureau and all of its broker-dealer customers as is required by the Plan as filed.

[1227] The Commission did not define the term "industry standard" in Rule 613. In the Adopting Release, the Commission noted that it expected the Plan to "specify the time increment within which clock synchronization must be maintained, and the reasons the plan sponsors believe this represents the industry standard." *See* Adopting Release, *supra* note 9, at 45774.

The benefits of alternative clock offset tolerances discussed in this Section may be dependent on time stamp granularity requirements. Related alternatives are discussed in Section IV.H.2.b, *infra*.

[1228] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section 12(p).

[1229] *See* FIF Clock Offset Survey, *supra* note 127.

[1230] *See* Section IV.D.2.b(2)B.i, *supra* for more information regarding the distribution of broker-dealer clock offset tolerances.

[1231] Based on FIF-organized conversations with broker-dealers and service bureaus. *See supra* note 880.

[1232] Systems that have greater clock offset tolerances may have technology that is too old to support smaller clock offset tolerances. The Commission preliminarily believes that if a shorter clock offset tolerance is important to these broker-dealers, they would update their systems to support newer technology capable of smaller clock offset tolerances.

[1233] *See supra* notes 441 and 442. Specifically, the NASDAQ SIP Web site implies that exchanges reporting to the NASDAQ SIP synchronize their systems to 100 microseconds.

[1234] *See* Section IV.D.2.b(2)B.i, *supra* for more information on clock offset tolerances of exchanges and the SIPs.

[1235] *See supra* note 436.

Relative to the proposed clock synchronization standard, the Commission preliminarily believes that an alternative approach that would consider the standard practices of different segments of the industry for the purposes of setting the clock synchronization requirements, and would require a smaller clock offset tolerance than in the Plan for certain business systems that are more critical to being able to accurately sequence order events, could have significant benefits. In other words, the Commission preliminarily believes that some business systems may be responsible for time stamping more time-sensitive order events than others, where more time-sensitive orders are those for which precise time stamps are more critical for event sequencing.

The Commission does not currently have the information necessary to specify which particular types of business system handle more time-sensitive orders because neither the FIF Clock Offset Survey nor the Plan provides this data. The Commission has no data from which it can independently estimate this because the Commission is not aware of any such data available to it. However, the Commission recognizes the potential for such an approach. For example, it is possible that almost all of the order origination events, routing events, modification events, and execution events, which are likely to be more time-sensitive than other CAT Reportable Events, occur on systems at broker-dealers that conduct certain types of businesses. The businesses that seem most likely to record these time-sensitive events include: Introducing broker-dealers; institutional broker-dealers; retail broker-dealers that accept customer orders electronically; registered market makers; principal trading firms; service bureaus that host order management systems; exchanges; and ATSs.

Further, some systems collect order events that either do not require a granular time stamp; other systems would not be required to record order events in real time. An example would be regional branches of broker-dealers that only handle manual orders which require a time stamp to the second until the broker enters the order into an electronic system. If the order entry hits a centralized system quickly, then perhaps the clock precision of the centralized system may be sufficient for sequencing.

The Commission is also soliciting comment on an alternative approach that would define industry standard by looking at information other than current industry practices; for example, by considering the most accurate technology currently available in the industry, or the standard recommended by a particular industry group or authority. Defining industry standards by majority practices may have the unintended effect of setting a standard that delays adopting advances in technology. The Commission preliminarily believes that this alternative approach could result in defining an industry standard for clock synchronization that would require a clock offset tolerance for all CAT Reporters that is lower than the 50 millisecond standard required by the Plan. The Commission seeks comment on any appropriate definitions of "industry standard" with respect to clock synchronization, including the costs and benefits of using any alternative definitions of "industry standard" for the purposes of setting clock synchronization requirements. The Commission also seeks comment on whether a definition of "industry standard" could set a maximum clock offset tolerance with an expectation that each CAT Reporter would be responsible for smaller clock offsets if the CAT Reporter is technically capable of such clock offsets.

The Commission conducted an analysis to assess the benefits of alternative approaches to defining industry standard that would result in smaller clock offset tolerances for some or all segments of CAT Reporters. The Commission evaluated the percentage of unrelated events that can potentially be sequenced under various clock offset tolerances, including the 50 millisecond tolerance outlined in the CAT NMS Plan. The Commission estimates that approximately 7.84% of unrelated orders for listed equities and 18.83% of unrelated orders for listed options can be accurately sequenced using a clock offset tolerance of 50 milliseconds.[1236] The Commission augmented this analysis by conducting a clock synchronization analysis to examine certain alternative clock offset tolerances from those examined in the FIF Clock Offset Survey.[1237] Table 10 shows the results of the Commission's analysis as a percentage of unrelated order events for equities that could be sequenced under various alternative clock offset tolerance.

TABLE 10—SEQUENCING ACCURACY OF UNRELATED EVENTS BY CLOCK OFFSET TOLERANCE

Clock offset tolerance	Percentage of unrelated events that can be sequenced	
	Equities (%)	Options (%)
50 milliseconds	7.84	18.83
5 milliseconds	16.51	35.54
1 millisecond	22.08	50.70
100 microseconds	42.47	78.42

[1236] *See* Section IV.E.1.b(2)A, *supra*. In general, events occur with such frequency that a 50 millisecond clock synchronization standard would not be sufficient to sequence all orders; *see also* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c) n.110 ("Events occurring within a single system that uses the same clock to time stamp those events should be able to be accurately sequenced based on the time stamp. For unrelated events, *e.g.*, multiple unrelated orders from different broker-dealers, there would be no way to definitively sequence order events within the allowable clock drift as defined in Article 6.8 [of the CAT NMS Plan].").

[1237] *See* Section IV.D.2.b(2)B, *supra*, for information on the Commission's clock offset tolerance analysis. Specifically, the analysis says that an order event can be sequenced if its time stamp is at least twice the clock offset tolerance from any other event on another venue.

The Commission's analysis suggests that approximately 16.51% of unrelated order events for equities and 35.54% of unrelated order events for options could be sequenced under a clock offset tolerance of 5 milliseconds, 22.08% of orders events for equities and 50.70% of order events for options could be sequenced under a clock offset tolerance of 1 millisecond, and 42.47% of order events for equities and 78.42% of orders events for options could be sequenced under a clock offset tolerance of 100 microseconds. Given these results, the Commission believes that requiring a smaller clock offset tolerance than the Plan's proposed 50 milliseconds for some segments of the industry could improve the accuracy of event sequencing.

Relative to the Plan's proposed universal 50 millisecond clock offset tolerance, the Commission preliminarily believes that requiring a smaller clock offset tolerance for some segments of the industry would likely increase the costs of the CAT NMS Plan. Table 11 is from page C–126 of the CAT NMS Plan, and it provides the costs of the Plan's proposed clock offset tolerance (50 milliseconds) and alternative tolerances (100 microseconds, 5 milliseconds, and 1 millisecond).[1238] These costs assume that each clock offset tolerance is applied to all business systems. However, as noted above, the alternative the Commission is soliciting comment on is to require smaller clock offset tolerance for certain segments of the industry. So, the estimates below provide an upper bound on the potential cost if the Commission requires smaller clock offset tolerances in some cases.

TABLE 11—IMPLEMENTATION AND ANNUAL ONGOING COST ESTIMATES PER FIRM BY CLOCK OFFSET TOLERANCE

Clock offset tolerance	Estimated implementation cost (per firm)	Estimated annual ongoing cost (per firm)
50 milliseconds	$554,348	$313,043
5 milliseconds	887,500	482,609
1 millisecond	1,141,667	534,783
100 microseconds	1,550,000	783,333

The Commission understands that the cost figures in Table 11 do not net out the current ongoing costs of clock synchronization, which are $203,846.[1239] Table 12 shows the preliminary estimated annual ongoing cost increase (ongoing costs minus current costs) to comply with various alternative clock offset tolerances as well as the clock offset tolerance specified in the Plan.

TABLE 12—ANNUAL ONGOING COST INCREASES PER FIRM BY CLOCK OFFSET TOLERANCE

Clock offset tolerance	Estimated annual ongoing cost increases (per firm)
50 milliseconds	$109,197
5 milliseconds	278,763
1 millisecond	330,937
100 microseconds	579,487

Based on these estimates, the Commission estimated aggregate clock synchronization costs for broker-dealers consistent with the estimation of their total CAT compliance costs as detailed in the Costs Section above.[1240] The Commission assumed that 171 broker-dealers would incur the full ongoing costs and full implementation costs indicated in the FIF Clock Offset Survey.[1241] Conversely, the remaining 1,629 broker-dealers that are already assumed to use service bureaus would rely on the 13 service bureaus to facilitate their clock synchronization, and therefore would pay lower implementation and ongoing costs than those in the FIF Clock Offset Survey. The Commission understands that broker-dealers that rely on service bureaus for order management systems and regulatory reporting usually use servers operated by their service bureaus and most would therefore not directly bear the costs to implement and comply with clock synchronization standards.[1242] For the implementation costs for those relying on service bureaus for clock synchronization, the Commission assumes ¼ FTE for 50 milliseconds, ½ FTE for 5 milliseconds, ¾ FTE for 1 millisecond, and 1 FTE for 100 microseconds. Under these assumptions, broker-dealers that outsource their order management and regulatory reporting obligations would incur costs (shown in Table 13) that are significant relative to the estimated implementation costs for broker-dealers that handle order management and reporting obligations in-house.[1243]

TABLE 13—IMPLEMENTATION COST ESTIMATES PER FIRM FOR OUTSOURCING FIRMS BY CLOCK OFFSET TOLERANCE

Clock offset tolerance	Estimated implementation costs (per firm) for outsourcing firms
50 milliseconds	$106,000
5 milliseconds	212,000
1 millisecond	318,000
100 microseconds	424,000

With these implementation costs, the Commission aggregated implementation and ongoing costs as indicated in Table 14.

[1238] Table 11 is from the CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(p) and it draws its numbers from the FIF Clock Offset Survey. See *supra* note 127.

[1239] *See* FIF Clock Offset Survey, *supra* note 127, at 16. This is based on current practice of the broker-dealers who responded to the survey.

[1240] *See* Section IV.F.3.a, *supra.*

[1241] The 171 broker-dealers comes from the total of Insourcers, ELPs, and Options Market Makers.

[1242] *See* Section IV.F.1.d, *supra* for a discussion of service bureaus passing costs on to clients.

[1243] As in the Costs Section above (*see* Section IV.F.1.c(2)C), monetizing the FTE costs involves multiplying the number of FTEs by $424,350. *See infra* note 1487.

TABLE 14—AGGREGATED IMPLEMENTATION AND ANNUAL ONGOING COST ESTIMATES BY CLOCK OFFSET TOLERANCE

Clock offset tolerance	Estimated aggregate implementation cost[1244]	Estimated aggregate annual ongoing cost[1245]
50 milliseconds	$268 million	$25 million.
5 milliseconds	497 million	63 million.
1 millisecond	714 million	75 million.
100 microseconds	956 million	131 million.

Table 14 suggests that the Plan's clock synchronization costs for the approximately 1,800 expected CAT Reporters would be approximately $268 million in estimated implementation costs and about $25 million in ongoing costs. To estimate the relative costs of each alternative compared to the Plan, the Commission subtracted the costs of the Plan from the costs of each alternative.

Table 15 provides estimates for how the costs of alternative clock offset tolerances applied to all business systems would be greater than those of the CAT NMS Plan if a different clock offset tolerance applied to all CAT Reporters.

TABLE 15—AGGREGATED IMPLEMENTATION AND ANNUAL ONGOING COST INCREASES BY CLOCK OFFSET TOLERANCE

Clock offset tolerance	Estimated increase in implementation cost (aggregate)	Estimated increase in annual ongoing cost (aggregate)
5 milliseconds	$229 million	$38 million.
1 millisecond	446 million	50 million.
100 microseconds[1246]	688 million	106 million.

The Commission does not have information on the implementation and ongoing costs to exchanges or ATSs of various alternative clock offset tolerances because trading venues were not included in the FIF Clock Offset Survey. The Plan does not provide this data, and the Commission has no other data from which it can independently estimate this, because the Commission is not aware of any such data available to it. However, exchanges may currently synchronize their clocks to within 100 microseconds.[1247] Consequently, the Commission preliminarily believes that any of the alternative clock offset tolerances discussed above would not materially increase costs to Participants relative to the costs they would incur under the Plan because their current clock synchronization procedures seem to satisfy any of the proposed clock offset tolerances. In the case of ATSs, these systems tend to be operated by large and complex broker-dealers that are unlikely to rely upon service bureaus to perform their clock synchronization responsibilities. Consequently, the Commission preliminarily believes that cost estimates for the broker-dealers surveyed by FIF are likely to include broker-dealers that operate ATSs and already reflect any additional clock synchronization costs attributable to operating ATSs. However, if Execution Venues (including ATSs) were to have smaller clock offset tolerances than other broker-dealer systems, broker-dealers operating ATSs would be expected to incur higher clock synchronization costs than other broker-dealers.

As noted above, the Commission is soliciting comment on both an alternative that would consider the standard practices of different segments of the CAT Reporters for the purposes of setting the clock synchronization requirements, and an alternative that would define industry standard by looking at information other than current industry practice. The Commission preliminarily believes that if the CAT NMS Plan used an alternative interpretation of "industry standard" that considered the standard practices of different segments of the CAT Reporters for the purposes of setting the clock synchronization requirements, the cost increases associated with smaller clock offset tolerances might be lower than estimates presented in the tables above. In particular, if the clock synchronization requirements were only applied to the most time-sensitive systems, the costs increases would be lower than those presented.[1248] In addition, if the only broker-dealers required to comply with clock synchronization requirements were the ones accepting, routing, and executing orders, the costs could be lower than those presented above. The Commission does not have the information necessary to quantify how much lower the costs would be under an alternative that applied different clock offset tolerances to different segments of the CAT Reporters, because neither the Plan nor the FIF Clock Offset Survey break the cost estimates for changes in clock synchronization requirements down by business system types, and the Commission has no data from which it can independently estimate this, because the Commission is not aware of any such data available to it.

[1244] $268 million ≈ 171*$554,348 + 1,629*0.25*$424,350. $497 million ≈ 171*$887,500 + 1,629*0.5*$424,350. $714 million ≈ 171*$1,141,667 + 1,629*0.75*$424,350. $956 million ≈ 171*$1,550,000 + 1,629*$424,350.

[1245] $25 million ≈ 171*$109,197 + 13*4.2*$109,197. $63 million ≈ 171*$278,763 + 13*4.2*$278,763. $75 million ≈ 171*$330,937 + 13*4.2*$330,937. $131 million ≈ 171*$579,487 + 13*4.2*$579,487. 13 is the number of service bureaus and 4.2 is the ratio between the total incremental ongoing charges to broker-dealers and the total incremental ongoing costs to service bureaus derived from the cost estimates above. *See* Section IV.F.2, *supra.*

[1246] The Commission recognizes that the benefits of clock synchronization of less than one millisecond are limited unless the time stamps are also more granular. Requiring more granular time stamps than the 1 millisecond in the Plan would increase the costs relative to those in Table 15.

[1247] *See* Section IV.D.2.b(2)B.i, *supra; see also supra* notes 435 and 436.

[1248] This belief is also consistent with information in the FIF Clock Offset Survey. *See supra* note 127, at 20. Specifically, the survey found that respondents would save on costs if the alternative clock offset tolerance were applied only to "server-side trading systems."

The Commission recognizes that a clock offset tolerance smaller than 50 milliseconds would have differential cost across market participants. An alternate approach to defining "industry standard" that took into account the standard practices of different segments of CAT Reporters could mitigate those costs. All FIF Clock Offset Survey respondents that provided technology information use technology capable of 50 millisecond clock offset tolerances, but 36% of those respondents do not employ a technology capable of clock offset tolerances smaller than 50 milliseconds. Some survey respondents indicated that they employ software that is not capable of clock offset tolerances of less than 50 milliseconds or that desktop PCs would be a challenge with such clock offset tolerances. An alternative definition of "industry standard" that considered the practices of various segments of the industry could apply smaller clock offset tolerances to a subset of business systems; the Commission expects that applying smaller clock offset tolerances to a subset of systems would cost less than applying such clock offset tolerances to all systems. However, the benefits could also be limited in terms of the percentage of unrelated events that could potentially be sequenced, as compared to a definition of "industry standard" that a set a lower clock offset tolerance for all CAT Reporters.

(2) Alternative Logging Procedures

Rule 613(d)(1) requires synchronizing business clocks that are used for the purposes of recording the date and time of any Reportable Event. The CAT NMS Plan further requires that Participants and other CAT Reporters maintain a log recording the time of each clock synchronization that is performed and the result of such synchronization, specifically identifying any synchronization initiated in response to an observed discrepancy between the CAT Reporter's business clock and the time maintained by the NIST exceeding 50 milliseconds.[1249] According to the FIF Clock Offset Survey, costs in logging the synchronization events is a significant driver of overall clock synchronization costs.[1250]

A few survey respondents indicated that the number of logged events would go up significantly with a shorter clock offset, which requires a costly logging system.[1251] Therefore, the Commission is soliciting comment on an alternative that would require logging only exceptions to the clock offset (*i.e.,* events in which a market participant checks the clock offset and applies changes to the clock).[1252] While logging every event, including clock offset checks, may be cost effective with longer clock synchronization tolerances, the Commission questions whether logging each event is cost efficient with finer clock offset tolerances, given the large number of events expected for the proposed and alternative clock synchronization standards. For example, if an investigation is relying on properly sequenced events, the investigation only would need to examine exception files to ensure the precision of the time stamps. The FIF Clock Offset Survey suggests that relaxing the logging requirement could reduce the burdens associated with clock synchronization.

The Commission cannot quantify the reduction in costs from this alternative because it lacks data on the proportion of clock synchronization costs that are associated with event logging and the proportion of those costs that could be avoided by alternative event logging requirements. The Commission preliminarily believes that any reduction in benefits from this alternative, as compared to the CAT NMS Plan's approach for clock synchronization, would be minor because the inclusion of clock synchronization checks that required no clock adjustment would not improve regulators' ability to sequence events. The Commission notes, however, that enforcement of clock synchronization requirements may be more difficult without comprehensive logging requirements that document firms' actions to comply with requirements; consequently, relaxing the logging requirement may also reduce incentives to comply with the clock synchronization requirements.

(3) Alternative Clock Synchronization Hours

The Commission is soliciting comment on alternative requirements for the times during which clock synchronization is required that would provide more flexibility than the requirements of the Plan. The clock synchronization requirement presented in the CAT NMS Plan makes no provision for reduced clock synchronization requirements at times during which systems are not performing tasks that produce time-sensitive CAT Reportable Events; in the FIF Clock Offset Survey, respondents identified that there were certain times during which maintaining clock synchronization is more costly. Survey respondents noted they would incur additional costs in maintaining clock offset "99.9% of the time" or with "100% reliability" and costs associated with managing "clock synch instability . . . after server reboot." The Commission notes that maintaining 99.9% or 100% reliability may be unnecessary during times when the system does not record Reportable Events. Further, the Commission understands that generally a system does not record Reportable Events during server reboots. Therefore, the Commission preliminarily believes that an alternative that does not require synchronizing clocks when servers are not recording Reportable Events or when precise time stamps are not as important to sequencing, such as outside of normal trading hours, would not materially reduce benefits. Given the responses to the FIF Clock Offset Survey, the Commission preliminarily believes that this alternative could reduce costs because synchronization activities and log entries related to those events would not be as beneficial outside of normal trading hours. The Commission does not have information necessary to quantify the cost reduction because cost information available to the Commission is not broken down by time of day or server status.

b. Time Stamp Granularity

The Commission is soliciting comment on the benefits and costs of an alternative time stamp granularity requirement of less than one millisecond. Rule 613(d)(3) requires time stamp granularity consistent with industry standards and, as discussed above, the Plan requires time stamps that reflect industry standards and are at least to the millisecond.[1253] Furthermore, the Plan requires Participants to adopt rules requiring that CAT Reporters that use time stamps in increments finer than milliseconds use those finer increments when reporting to the Central Repository.[1254] As discussed in the Commission's analysis of alternative clock offset tolerance requirements, millisecond time stamps may be inadequate to allow sequencing of the majority of unrelated Reportable Events across markets.[1255] In addition, as discussed below, the Commission recognizes that the benefits of more granular time stamps would be limited unless the Plan were to require a clock offset tolerance far lower than is proposed in the Plan.

[1249] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[1250] Other cost drivers include hardware and software costs and costs in ensuring reliability.

[1251] *See* FIF Clock Offset Survey, *supra* note 127, at 19. One survey respondent noted that a log file for a one second clock offset would require 1 gigabyte of compressed storage each day but clock offset log files for 50 millisecond clock offset would increase the daily data storage 10 fold. Another survey respondent noted that its current system logs 86,000 events per day and that the proposed clock offset would require logging 35 million events per day; *see also* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[1252] This is one of the alternatives suggested in the FIF Clock Offset Survey. *See supra* note 127.

The Commission recognizes that regulators' ability to sequence events is dependent on both clock offset tolerance and time stamp granularity. If the Plan requires any or all CAT Reporters to implement clock offset tolerances of less than a millisecond, time stamps reported at the millisecond level would not capture the additional precision of the smaller clock offset tolerance and much of the benefits of this smaller clock offset requirement would be lost if time stamps were rounded or truncated due to a millisecond time stamp granularity requirement. The Commission notes that provisions in the Plan require that any Participant that utilizes time stamps in increments finer than the minimum required to be reported under the Plan utilize such increments in reporting data to the Central Repository. Also, the Commission notes that a sub-millisecond clock offset tolerance would not in itself require the reporting of sub-millisecond time stamps to the Central Repository.[1256]

A requirement for time stamps at resolutions finer than 1 millisecond would entail certain costs. Because some market participants already use time stamps at the sub-millisecond level and will be required to report this information under the Plan, such a requirement is unlikely to create significant additional costs for CAT Reporters. Furthermore, while some exchanges and broker-dealers are already required to report time stamps at the sub-millisecond level, implementation costs are likely to vary across CAT Reporters. The Plan does not provide data on the cost of requiring sub-millisecond time stamps, and the Commission has no other data from which it can independently estimate this, because the Commission is not aware of any such data currently available to it.

Requiring sub-millisecond time stamp reporting would bring certain benefits. However, the Commission preliminarily believes these benefits may be limited without requiring clock offset tolerances of less than one millisecond as well. For example, with a 50 millisecond clock offset tolerance, a time stamp can only pinpoint the time of an event to a 100 millisecond range.[1257] In this case, sub-millisecond time stamps provide little benefit to regulators attempting to determine the order of events occurring in venues with separate clocks. However, even with a 1 millisecond clock offset tolerance, a sub-millisecond time stamp granularity requirement could provide some benefit for regulators attempting to sequence events. For example, two events recorded at times 12:00:00.0001 and 12:00:00.0021 on different venues can be sequenced with a 1 millisecond clock offset, while if these time stamps were rounded or truncated to 12:00:00.000 and 12:00:00.002, they could not be sequenced with certainty, because it would be possible that both events occurred at 12:00:00.001. If the Plan were to require sub-millisecond clock offset tolerances, the additional benefits of this sub-millisecond clock offset tolerance would be significantly limited without time stamps that were similarly granular.

c. Error Rate

The Commission is soliciting comment on the benefits and costs of alternative maximum Error Rates. The Commission does not possess sufficient data to quantitatively assess the costs and benefits of an alternative to the maximum Error Rates specified in the CAT NMS Plan. However, the Commission is using information provided in the CAT NMS Plan to perform a qualitative assessment of the proposed maximum Error Rates.[1258]

The potential benefits from a lower maximum Error Rate than proposed in the CAT NMS Plan could be improved accuracy in the data, and a quicker retirement of OATS and other regulatory data reporting systems.[1259] However, the CAT NMS Plan states that errors would be de minimis by the morning of day T+5, therefore the improvement in accuracy does not seem to affect the data available to regulators starting on day T+5.[1260] Accordingly, the benefit of improved accuracy as a result of a lower maximum Error Rate comes primarily from regulatory use of the data prior to day T+5. While the Commission believes that most regulatory uses would involve data after day T+5, regulators also have essential needs for uncorrected data prior to day T+5. For example, as discussed in the Benefits Section, the availability of unprocessed data within three days of an event could improve the Commission's chances of preventing asset transfers from manipulation schemes.[1261] Therefore, a lower Error Rate in data available before day T+5 could, in certain regulatory contexts, be meaningful.

Second, because OATS currently has a lower observed error rate than the CAT NMS Plan, a reduction in CAT Error Rates may accelerate the retirement of OATS because the SROs may find it advantageous to retain OATS until CAT Data is at least as accurate as OATS data. However, the CAT NMS Plan does not require a particular target Error Rate before OATS can be retired and the Plan does not estimate any cost savings associated with the retirement of OATS or other systems, beyond those resulting from the end of a period of costly duplicative reporting. Therefore, any acceleration in the retirement of OATS would not provide a direct benefit resulting from a lower Error Rate. Further, the error rates in OATS may not be comparable to the Error Rates in CAT Data because the algorithm that identifies errors in CAT Data is unlikely to be identical to the algorithm that identifies errors in OATS. In particular, the Plan requires some types of validation checks on CAT Data that OATS data does not go through. These additional validation checks will help to ensure the accuracy of information types not currently collected by OATS such as Customer Account Information, Firm Designated

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[1253] *See* Section IV.H.1.e, *supra*.

[1254] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(c).

[1255] *See* Section IV.E.1.b(2)B, *supra*.

[1256] *See* CAT NMS Plan, *supra* note 3, at Section 6.8(b).

[1257] *See* Section IV.H.2.a(1), *supra*.

[1258] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.3(b).

[1259] The Commission recognizes that a lower Error Rate could also lead to the same accuracy level as the proposed Error Rate, but more violations and consequences from those violations. This is likely to occur if the Error Rates in the Plan are lower than what every broker-dealer could reasonably obtain on the timeline; as a consequence, because broker-dealers are reporting the most accurate data they are currently able to report, a lower Error Rate cannot improve data quality, but it can produce additional costs in the form of penalties levied by the Plan Processor. However, as long as at least one broker dealer can reasonably obtain lower Error Rates than those in the Plan, a lower Error Rate would improve accuracy because the lower Error Rate would incentivize that broker-dealer to reduce its initial errors.

[1260] *See id.* at Appendix C, Section A.3(b), n.102.

[1261] *See* Section IV.E.3.d(3), *supra*.

ID, and options information, or to ensure the accuracy of information necessary for the order lifecycle linking process.[1262] Consequently, the Commission cannot be sure of the specific CAT Error Rate that would accelerate retirement of OATS. In addition, the Commission does not have cost estimates for different maximum Error Rates because such information was not provided in the CAT NMS Plan.

While reducing error rates may have these potential benefits, the Commission recognizes that it would also come at a cost. In particular, reducing Error Rates could increase the implementation and ongoing costs incurred by CAT Reporters and the Central Repository as compared to costs estimated in the Plan, as filed. To achieve lower Error Rates, some CAT Reporters might have to run additional validation checks on their data before sending their data to the Central Repository. Such CAT Reporters would incur additional costs to code and test any additional validation checks prior to implementation. CAT Reporters might also have to monitor and adjust their validation checks to respond to Error Rate reports from the Central Repository, incurring additional ongoing costs. However, the CAT Reporters already achieving lower Error Rates might not require additional checks, adjustments, or monitoring. Additionally, the Commission preliminarily believes that costs incurred by CAT Reporters to reduce error rates prior to sending data to the Central Repository may ultimately result in lower costs associated with correcting errors after the data is sent. The Commission also notes that the costs incurred would depend in part on the format in which data is reported to the Central Repository, which has yet to be determined. If a solution is chosen that requires the reformatting of data, and this reformatting results in errors, then the costs could be higher. Conversely, a solution that does not require data reformatting could result in a lower Error Rate with lower costs to CAT Reporters.

Additionally, the Plan contains provisions that require the Plan Processor to monitor and address Error Rates. For example, the Plan Processor is required to notify each CAT Reporter that exceeds the maximum Error Rate, and provide the specific reporting requirements that they did not fully meet. Requiring a lower Error Rate could increase the costs of these provisions, as compared to the costs estimated in the Plan as filed, because more CAT Reporters would exceed the Error Rate at which penalties are levied by the Plan Processor.

d. Error Correction Timeline

The Commission is soliciting comment on an alternative error correction timeline to that proposed in the CAT NMS Plan. The CAT NMS Plan proposes a deadline of T+3 for submission of corrected data to the Central Repository.[1263] The CAT NMS Plan also discusses recommendations from FIF and SIFMA to impose a day T+5 deadline, which is the current standard for OATS.[1264] The Participants state in the CAT NMS Plan that they believe it is important to retain the day T+3 deadline in order to make data available to regulators as soon as possible.[1265]

The Commission is soliciting comment on whether the CAT NMS Plan should impose a day T+5 deadline rather than the day T+3 deadline. In comment letters submitted to the Participants, FIF and SIFMA maintain that the day T+3 deadline may not be feasible and would prove costly to market participants.[1266] The alternative of a day T+5 deadline could reduce the costs relative to the CAT NMS Plan for CAT Reporters. The Commission preliminarily believes that the delays in regulatory access from a day T+5 deadline would significantly reduce regulators' ability to conduct surveillance and slow the response to market events relative to the CAT NMS Plan. However, the Commission also believes that day T+5 error correction may reduce costs to industry relative to the CAT NMS Plan, although the Commission is unaware of any cost estimates that have been provided to date.

e. Funding Model

The mechanism by which CAT fees are allocated is important because it can potentially disadvantage particular business models. Although the Plan does not discuss the final details of the CAT funding model, it does provide some details, including a set of funding principles that the Participants have discussed with the Development Advisory Group. The Commission is soliciting comment on alternative mechanisms for allocating fees across Execution Venues and across Industry Members.

The CAT NMS Plan presents details regarding an allocation of costs between the Execution Venues and the other Industry Members (*i.e.*, broker-dealers), but does not detail the proportions of fees to be borne by each group. Under the CAT NMS Plan, fees would be tiered by activity levels, with market participants within a given tier incurring a fixed fee.[1267] In the case of Execution Venues (exchanges and ATSs), market share of share volume would determine the tier of the Execution Venue. In the case of broker-dealers, fees would be allocated by message traffic. The Commission is cognizant that ATSs are operated by broker-dealers, complicating this division of fees between broker-dealers and Execution Venues. This is discussed further below.

(1) Unified Funding Models

The Commission is soliciting comment on several unified funding models as alternatives to the Plan's bifurcated funding model. One of the alternative funding models the Commission is soliciting comment on is a unified funding model in which Central Repository costs are allocated across all market participants (including Execution Venues) by message traffic. The Commission expects that message traffic will be a primary cost driver for the Central Repository, because transactional volume (which is cited by the Plan as a primary cost driver for the Central repository) is highly correlated with message traffic. Consequently, assessing CAT costs on market participants by message traffic may have the benefit of aligning market participants' incentives with the Participants' stated goal of minimizing costs. However, the Commission is also aware that while a broker-dealer's choice of business model is likely to determine its level of message activity, the majority of an exchange's message traffic is passive receipt of quote updates.[1268] Because quotes must be updated on all exchanges when prices change, exchanges with low market share are likely to have more message traffic (incurring CAT fees) per executed transaction (generating revenue).[1269] Consequently, a model that charges exchanges for the passive receipt of messages from broker-dealers is likely to disadvantage the smaller exchanges relative to a model that charges for market share of executions.

[1262] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Sections A.1(a)(iii) and A.3(a) and Appendix D, Section 7.2 for a discussion of the types of required validations of CAT Data.

[1263] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a)(iv).

[1264] *Id.*

[1265] *Id.*

[1266] *See* Letter from Manisha Kimmel, Managing Director, FIF, to the Participants, dated November 19, 2014, *available at http://www.catnmsplan.com/industryfeedback/p601972.pdf; Industry Recommendations for the Creation of a Consolidated Audit Trail (CAT)*, SIFMA, March 28, 2013, *available at http://www.catnmsplan.com/industryfeedback/p242319.pdf.*

[1267] For a discussion of the economic effect of the tiered structure, *see* IV.F.4.c, *supra.*

[1268] Using MIDAS data, Commission staff analyzed the number of equity exchange proprietary feed messages and trades during the week of October 12, 2015. The message per trade ratio varied across exchanges from 38.46 to 987.17, with a median of 57.21.

The Commission is also soliciting comment on an alternative approach to reporting market maker quotations on exchanges that could address this concern. In this approach, market makers (both equity and options) would not need to report their quotation updates. Exchanges (both equity and options) would report quotation sent times (as detailed in the Plan with regard to Options Market Makers and the Exemption Request[1270]). Exchanges would not be assessed message traffic fees for these quotation updates; the broker-dealers who sent the quotes would be assessed for this message traffic. All other message traffic, regardless of which market participant initiated it, would be assessed fees associated with CAT using a common rate formula.

The Commission is soliciting comment on this alternative for a number of reasons. First, it ties CAT costs to a primary driver of the magnitude of Central Repository costs: message traffic.[1271] Second, it substantially reduces the number of messages stored in the Central Repository. Third, it avoids disadvantaging smaller exchanges whose message traffic may be relatively large compared to their execution volume. Finally, this alternative avoids bifurcated fee approaches that may cause one Execution Venue to be relatively cheaper than another due to the manner in which CAT fees are assessed and may cause conflicts of interest for broker-dealers routing customer orders.[1272] However, this alternative assesses CAT fees based on messages rather than the revenue-generating activity of trades. This may provide market participants with incentives to change their business models to reduce CAT fees, which could lead to reduced quotation activity that could be detrimental to market liquidity levels. Furthermore, because the vast majority of message activity originates with broker-dealers, this approach necessarily shifts most of the ultimate CAT funding burden to broker-dealers.

The Commission also is soliciting comment on a second alternative approach to CAT funding, a unified funding approach where the tiers in the funding model are based on market share of share volume. Under this approach, all market participants (both exchanges and broker-dealers) would qualify for a tier based on reported share volumes. Share volume would count equally toward the tier regardless of the Execution Venue selected by the broker-dealer originating the order. However, this approach does not align the costs of operating and maintaining the Central Repository, which would largely depend on message traffic, with the fees charged to market participants. Furthermore, it is possible that some Execution Venues could compete for order flow by not passing this fee on to their customers, generating the same limitations as discussed above for the funding model in the Plan.[1273]

A third alternative would be for the funding model to impose fees on every individual trade instead of imposing a fixed fee by tier. This approach has several benefits. First, the Commission preliminarily believes that implementation costs for this approach are likely to be lower than other alternatives because infrastructure already exists to levy fees on each trade (this is the mechanism by which Section 31 fees are levied).[1274] Second, it ties fees to the revenue-generating activity of trading, rather than quoting activity, which results in those more likely to afford high fees paying the higher fees. Quoting activity provides liquidity to the market, but often does not necessarily result in an execution that can bring revenue to the market participant placing the quote; consequently, levying CAT fees on trades avoids making a generally desirable activity (posting liquidity) more costly.[1275] Third, it avoids the problems that may accompany a bifurcated approach to CAT cost allocation. Because the fee is levied regardless of where the trade occurs, it limits incentives of market participants to route to exchanges to avoid message traffic fees within broker-dealers or to avoid exposing an order in multiple venues to try to find non-displayed liquidity. These liquidity-seeking activities might reduce a client's trading costs, but they also potentially incur message traffic fees, creating a conflict of interest for broker-dealers.

Assessing fees directly on trades entails certain costs as well. First, it does not provide incentives for market participants to limit their message traffic, which is a primary cost-driver for the Central Repository. Second, it does not provide the benefits of a tiered approach, which the CAT NMS Plan lists as including transparency, predictability and ease of calculation.[1276]

(2) Bifurcated Funding Models

The Commission is also soliciting comment on alternatives to the funding model proposed in the CAT NMS Plan that would also be bifurcated. One alternative would be to allocate CAT costs to broker-dealers by market share of share volume while retaining the Plan's funding model for Execution

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[1269] Commission staff data analysis confirms this for the smallest exchanges. Except for the smallest exchanges, the trade to message ratios range from about 0.016 trades for every quote update to about 0.026 trades for every quote update and appear constant across market share levels. However, the smallest exchanges by market share have only about 0.001 trades for every quote update to about 0.009 trades for every quote update.

[1270] *See* Exemption Order, *supra* note 18, at 7–8.

[1271] *See* Section IV.F.1.a, *supra*, stating that transactional volume is a primary driver of the costs of the Central Repository. The Commission preliminarily believes that transactional volume is highly correlated with message traffic.

[1272] For example, if the CAT funding model were set to make ATS trades significantly more costly relative to exchange trades, the exchanges might benefit from increased market share because ATSs might be compelled to increase their access fees to offset the proportionately higher CAT charges that they would incur. In the extreme, some ATSs might cease operations or seek to register as exchanges. Most ATSs do not disseminate quotation information; exchanges are required to do so. Reorganizing an ATS as an exchange therefore involves significant changes to its business model. Consequently, the Commission believes it unlikely that many ATSs would register as exchanges to avoid proportionately higher CAT charges. If certain types of trades have lower costs when their trades execute on an ATS, their trading costs would increase if they are forced onto exchanges. If some trades would not happen in the absence of an ATS, this would drive down overall trading volumes (as opposed to a shift from ATS to exchange). Lower overall trading volumes would be considered welfare-reducing, as they indicate foregone gains from trade.

[1273] *See* Section IV.F.4.c, *supra*.

[1274] Under Section 31 of the Act, 15 U.S.C. 78ee, and Rule 31 thereunder, 17 CFR 240.31, SROs such as FINRA and the national securities exchanges must pay transaction fees to the SEC based on the volume of securities that are sold on their markets. These fees are designed to recover the costs incurred by the government, including the SEC, for supervising and regulating the securities markets and securities professionals. The SROs have adopted rules that require their broker-dealer members to pay a share of these fees. Broker-dealers, in turn, may impose fees on their customers that provide the funds to pay the fees owed to their SROs. *See* SEC, Section 31 Transaction Fees (September 25, 2013), *available at http://www.sec.gov/answers/sec31.htm*.

[1275] Some quoting behavior may be costly to the market, for example spoofing or layering. This analysis assumes that message traffic fees associated with this undesirable behavior would not be sufficient to reduce that behavior. If that assumption is false, funding models that assign fees to quotes have the additional benefit of reducing disruptive activity. The Commission preliminarily believes that the benefits of reducing disruptive quoting activity via levying fees on quotes would not justify the costs of reducing beneficial quoting activity through the same fees.

[1276] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(v)(B).

Venues.[1277] A benefit of this alternative would be to avoid disincentives to liquidity provision operations, particularly for infrequently traded securities and high volatility securities. A disadvantage of this approach would be that it does not align the fees charged to a CAT Reporter with the costs those CAT Reporters impose on the Central Repository in terms of message traffic, potentially resulting in disproportionate charges to CAT Reporters because high message traffic broker-dealers would pay no more than low message-traffic broker-dealers with the same level of trading activity.

The Commission is further soliciting comment on the alternative of requiring the CAT NMS Plan to treat ATSs only as broker-dealers for funding purposes, instead of treating ATSs as Execution Venues. Under this alternative, firms that operate ATSs would not be charged for both their ATS's market share of share volume (like an exchange) and its message traffic (as a broker-dealer).[1278] Instead, the firm operating the ATS would pay fees based on the ATS's message traffic as part of its operations as a broker-dealer, rather than as an Execution Venue as well, for fee purposes. As described in Section IV.F.4.d, the Commission preliminarily believes that under the current funding model in the CAT NMS Plan, the cost differentials that result might create incentives for broker-dealers to route order flow to minimize costs, creating a potential conflict of interest with broker-dealers' investor customers, who are likely to consider many facets of execution quality (such as price impact of a trade and probability of execution in a venue in which the order is exposed) in addition to any of these costs that are passed on to them.[1279] The Commission is aware that this alternative would, in effect, shift part of the Central Repository funding costs from broker-dealers to Execution Venues because volume transacted on ATSs would not be assessed a portion of the Execution Venue funding burden and this portion would instead be allocated to exchanges. Furthermore, the Commission is aware that it is possible that under this alternative approach, ATSs might pay less in fees than similarly situated exchanges, which could disadvantage exchanges relative to ATSs.

The Commission is also soliciting comment on the alternative approach of not charging broker-dealers for message traffic to and from their ATSs while still assessing fees to ATSs as Execution Venues or exchange broker-dealers for their message traffic. Under this alternative, broker-dealers that operate ATSs would pay trading volume based fees on their ATSs volume in the same manner as exchanges' fees are assessed. However, the message traffic to and from the ATS would not be included in the message traffic used to calculate fees assessed to the broker-dealer that sponsors the ATS. The Commission preliminarily believes this alternative would help mitigate the broker-dealer routing incentives discussed above. The Commission is aware that because the volume executed on ATSs would be included in the portion of Central Repository funding assigned to Execution Venues, this funding approach would not shift part of the funding burden assigned to Execution Venues away from ATSs (and the broker-dealers that operate them) to exchanges as the previous alternative would.

The Commission preliminarily believes that either of these ATS-related funding alternative approaches would avoid disadvantaging ATSs relative to similarly situated exchanges, and would be less likely to result in the conflicts of interest in routing described above. Currently, the Commission lacks sufficient details on the fee structure to make this determination, because the fee structure has not yet been finalized.

The Commission is also soliciting comment on the alternative of excluding ATS volume from TRF volume for purposes of allocating fees across Execution Venues. Under this alternative, SROs that operate TRFs (currently only FINRA) would not pay Execution Venue fees for volume that originated from an ATS execution. This alternative would avoid the problem of double-counting ATS volume as share volume, which originates because each ATS trade is counted for fee-levying purposes as share volume associated with an ATS, then counted again as share volume when the trade is printed to a TRF. However, the Commission notes that other over the counter volume, such as occurs when orders are executed off-exchange against a broker-dealer's inventory, would be assessed share volume fees while the message traffic that resulted in this execution would also be subject to fees through the broker-dealers that had order events related to these transactions. This contrasts to executions that occur on exchanges, where the venue that facilitates the execution does not pay fees for message traffic that led to the execution.

The Commission is also soliciting comment on the alternative of not treating the Trade Reporting Facilities ("TRFs") as FINRA Execution Venues. TRFs capture ATS share volume, which is already subject to fees allocated to Execution Venues, and non-ATS off-exchange share volume, which is subject to CAT fees allocated to broker-dealer message traffic. Consequently, under the approach in the Plan, the activity that generates a TRF trade report is already assessed CAT fees through the broker-dealers that facilitate the trade, or the ATSs that served as the Execution Venue. Under this alternative approach, FINRA would not pay any fees directly into the Central Repository, and broker-dealers would only incur fees directly levied on them by the Operating Committee, rather than also indirectly paying the TRF fees passed on to them by FINRA. If FINRA does not pay fees directly to the Central Repository, this could alter its incentives with respect to matters of cost voted on by the Operating Committee. However, it is possible that, since FINRA represents the viewpoints of its broker-dealer members, its incentives would be similar under either approach.

[1277] SROs currently fund their regulatory data collection through a number of mechanisms. The Commission notes that FINRA does not charge its members for OATS directly. Rather, it is funded from FINRA's regulatory budget, which is collected from its members through various membership fees. The options exchanges charge an Options Regulatory Fee ("ORF"), which is a pass-through exchange fee collected by OCC clearing members on behalf of the U.S. option exchanges. The stated purpose of the fee is to assist in offsetting exchange costs relating to the supervision and regulation of the options market (*e.g.,* routine surveillance, investigations, and policy, rule-making, interpretive and enforcement activities). The fee was first adopted by CBOE in 2008. *See* Securities Exchange Act Release No. 58817 (October 20, 2008), 73 FR 63744 (October 27, 2008). Subsequently, PHLX (Securities Exchange Act Release No. 61133 (December 9, 2009), 74 FR 66715 (December 16, 2009), ISE (Securities Exchange Act Release No. 61154 (December 11, 2010, 74 FR 67278 (December 18, 2009)), BOX (*See* Securities Exchange Act Release No. 61388 (January 20, 2010), 75 FR 4431(January 27, 2010)), NYSEAmex (Securities Exchange Act Release No. 64400 (May 4, 2011), 76 FR 27114 (May 10, 2011), NYSE Arca (Securities Exchange Act Release No. 64399 (May 4, 2011), 76 FR 27114 (May 10, 2011), NASDAQ (Securities Exchange Act Release No. 66158 (January 13, 2012), 77 FR 3024 (January 20, 2012, C2 (Securities Exchange Act Release No. 67596 (August 6, 2012), 77 FR 47902 (August 10, 2012)), MIAX (Securities Exchange Act Release No. 68711 (January 23, 2013), 78 FR 6155 (January 29, 2013)), ISE Gemini (Securities Exchange Act Release No. 70200 (August 14, 2013), 78 FR 51242 (August 20, 2013)), and BATS (Securities Exchange Act Release No. 74214 (February 5, 2105), 80 FR 7665 (February 11, 2015)) also adopted an ORF. The OFR is currently assessed to customer orders at a rate of $0.0417 per U.S. exchange listed option contract. The ORF is assessed on all trades, both buys and sells. Further, FINRA charges fees for reporting to TRACE. Certain fees are based on the number of users and type of connection a firm has to the system, and others are based on size of the transaction. *See* FINRA Rule 7730.

[1278] As explained in Section IV.F.4.c, *supra,* the Commission preliminarily believes that the bifurcated funding model proposed in the Plan results in differential CAT costs between Execution Venues because it would assess fees differently on exchanges and ATSs for two reasons. First, message traffic to and from an ATS would generate fee obligations on the broker-dealer that sponsors the ATS, while exchanges incur no message traffic fees. Second, broker-dealers that internalize off-exchange order flow, generating off-exchange transactions outside of ATSs, would face a differential funding model compared to ATSs and exchanges.

[1279] *See* CAT NMS Plan, *supra* note 3, at Article VIII.

The CAT NMS Plan would allocate net profit or net loss from the operation of the CAT equally among the Participants, regardless of size, which could advantage small exchanges in the event of a profit and disadvantage small exchanges in the event of a loss. This could negatively impact competition if the cost differentials are significant enough to alter the set of services that some competitors offer. As an alternative, the Commission is soliciting comment on whether the profit or loss from operating CAT should be allocated across Participants by market share of share volume, consistent with how the CAT costs would be allocated under the Plan.[1280] The Commission preliminarily believes that this alternative would limit the possibility of extraordinary profits or losses from CAT resulting in a disproportionate advantage or disadvantage to exchanges with low trading volume.

Finally, the Commission is soliciting comment on requiring a strictly variable funding model, rather than the fixed-tiered model in the CAT NMS Plan. Under a variable funding model, each trade or message is subject to a fee, rather than a broker-dealer incurring a fixed fee that depends on that broker-dealer's volume tier.[1281] The Commission preliminarily believes that this alternative might increase administrative costs of the CAT NMS Plan as compared to an approach that uses the fixed-tiered funding model. However, the Commission also preliminarily believes that the fixed-tiered funding model can create incentives for market participants to change their behavior to avoid fees when their activity is near the boundary between two tier levels.[1282] The Commission preliminarily believes that a strictly variable funding model could reduce inefficiencies resulting from market participants changing their behavior to move into a lower fee tier.

f. Requiring Listing Exchange Symbology

The Commission is soliciting comment on an alternative to the CAT NMS Plan that would allow CAT Reporters to report using their existing symbologies, rather than listing exchange symbology. The Plan requires the Plan Processor maintain a complete symbology database, including the historical symbology. The CAT NMS Plan also requires CAT Reporters to report data using the listing exchange symbology format, which would be used in the display of linked data. The CAT NMS Plan also requires Participants to provide the Plan Processor with the issue symbol information, and validation of symbology would be part of data validation performed by the Plan Processor.[1283]

The Commission preliminarily believes that, in light of the proposed requirement for the Plan Processor to maintain a complete symbology database, the requirement that CAT Reporters report using listing exchange symbology may result in unnecessary costs to CAT Reporters. Therefore, the Commission preliminarily believes that the alternative of allowing CAT Reporters to use their existing symbologies for reporting purposes could significantly reduce the costs for exchanges and broker-dealers to report order events to the Central Repository, as compared to the approach in the CAT NMS as filed, without a significant impact on the expected benefits of the Plan or the costs to operate the Central Repository.

Currently, Execution Venues handle complex symbology in different fashions. Some common stocks, for example, have multiple classes of shares. Exactly specifying the issue to be traded involves identifying the ticker symbol and sometimes a share class. On some venues, the convention is that these security types are reported without a delimiter in the symbol; other venues use a delimiter, and delimiters can vary across venues. For example, assume a firm has a listing symbol of ABC, and has two classes of shares, A and B. An issue might be "ABC A" on one venue, "ABC_A" on another, and "ABCA" on a third. This can cause numerous problems for analyses that extend beyond a single trading venue, particularly if "ABCA" is the complete listing symbol for an unrelated security. As mentioned in the Benefits Section, the inclusion of the complete symbol history of a security and the requirement for queries, reports, and searches to automatically collect the appropriate data despite symbol changes promotes accurate query responses by ensuring the inclusion of order events that might have been excluded because of symbology differences and by excluding order events in unrelated securities. The Commission preliminarily believes that the CAT NMS Plan can achieve these benefits without requiring CAT Reporters to report using listing exchange symbology.

As discussed in the Costs Section, one potential cost driver to CAT Reporters is the need to process reports before submitting them to the Central Repository.[1284] If reports can contain drop copies from an order management system, CAT Reporters can aggregate their drop copies and send them without further processing the reports. If, on the other hand, CAT Reporters need to transform or add any fields to the report, those CAT Reporters would need to develop, test, and maintain code to run the transformation, and they would need to actually transform the data at least once a day. If CAT Reporters do not need to run this transformation at all, they could save money. The Commission preliminarily believes that the requirement to report in listing exchange symbology could be the only requirement that necessitates that CAT Reporters transform data before reporting it to the Central Repository.[1285] Therefore, the Commission preliminarily believes that eliminating this requirement could reduce costs relative to the CAT NMS Plan as filed.

Some broker-dealers may already have adequate computational resources to run the transformation, whether at once, in batches, or in real-time; others could have to invest in such resources—an investment that would be saved by eliminating the requirement to use listing exchange symbology. The degree of cost savings would depend on any requirements to transform the data prior to reporting, which depends on the allowable formats for transmission. The CAT NMS Plan does not specify the allowable formats or whether the Central Repository would require a fixed format. If the Technical Specifications require a fixed format, broker-dealers would most likely have to transform their data prior to reporting it to the Central Repository regardless of the requirement to use listing exchange symbology, and the listing exchange symbol requirement could add very little to the reporting costs. Therefore, the Commission recognizes significant uncertainty in the cost savings associated with this alternative.

[1280] *Id.*

[1281] For example, under a fixed-tiered funding approach, any broker-dealer with no more than 10,000 CAT Reportable Events in a given month might pay $100 in fees, even a broker-dealer reporting a single event. Under a strictly variable funding approach, every broker-dealer CAT message might be assessed one cent in fees. For a broker-dealer reporting 10,000 CAT Reportable Events in a given month, the same fee burden would be incurred, but a broker-dealer reporting a single CAT reportable event would pay only one cent.

[1282] *See* Section IV.F.3.b, *supra.*

[1283] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a).

[1284] *See* Section IV.F.3.a, *supra.*

[1285] *See id.*

Further, the Commission cannot estimate the degree to which eliminating this requirement could reduce costs as compared to those in the CAT NMS Plan as filed, because it lacks the data to do so. The Plan assumes the need to transform the data to match exchange symbologies and therefore does not separately itemize the cost for transformation as a separate step in the reporting process. The Commission has no data from which it can independently estimate the cost differential because it depends on information internal to each of a heterogeneous group of CAT Reporters (*e.g.*, the symbologies their current systems use and whether those are readily transformed to match listing exchange symbologies), which information is not compiled or stored anywhere and to which the Commission therefore does not have ready access.

g. Data Accessibility Standards

The Commission is soliciting comment on alternative approaches to the manner in which the CAT NMS Plan provides data access to regulators. Section IV.E.1.c of the CAT NMS Plan summarizes the Central Repository's requirements to provide access to regulators. This access would include both an online targeted query tool and a user-defined direct query or bulk extract.[1286] The CAT NMS Plan also specifies minimum standards the Central Repository must meet, such as capacity to support 3,000 minimum regulatory users and minimum acceptable response times for queries of varying complexity and size.[1287] The CAT NMS Plan also requires that the Plan Processor provide an open API that allows use of regulator-supplied common analytic tools. As discussed above, the CAT NMS Plan could result in many improvements to regulatory activities such as surveillance, examinations, and enforcement, but these benefits may not be fully realized if access to data is cumbersome or inefficient.[1288] The Commission does not have information on the incremental benefits and costs of each aspect of regulator access as would be necessary to analyze specific alternatives to the many data access standards in the CAT NMS Plan.

The Commission is generally soliciting comment on alternatives to each minimum data accessibility standard required in the CAT NMS Plan. With multiple standards that could each be adjusted in countless ways, the set of possibilities is infinite, which precludes their enumeration and discussion within this analysis. Instead, this Section discusses several examples and requests comment on alternative standards that might be adopted. Because query response time standards provide exact limits, the Commission uses those to illustrate how changing the standards could affect benefits and costs. The CAT NMS Plan requires query responses for various types of queries of 5 minutes, 10 minutes, 3 hours, and 24 hours, where the simplest queries involving scanning narrow sets of data would be required to return in 5 minutes and complex queries scanning multiple days of data and returning large datasets would be required to return within 24 hours.

The Commission notes that particularly large and complex data queries can take extensive computing resources. While the benefits of direct access to CAT Data depend on reasonably fast query responses, the Commission recognizes that faster query response times come at a cost. The Commission does not have detailed information on significant breakpoints in those costs to judge whether slightly longer response times than those in the Plan could significantly reduce the costs of developing, maintaining, and operating the Central Repository. For example, the Commission does not know whether a 48-hour response time on a query of 5 years of data is significantly less expensive than a 24 hour response time, but either maximum response time would provide a significant improvement in timeliness over current data. Likewise, the Commission does not know whether the response times could be faster without a significant increase in costs. The Commission recognizes that the detailed information on numerous other minimum standards regarding access to regulators is similarly unclear. Therefore, the Commission requests comment regarding all standards for regulatory access and whether technology creates natural breakpoints in costs such that a particular alternative could reduce the costs of the Plan without significantly reducing benefits or could increase benefits without significantly increasing costs.

h. Intake Capacity Levels

The Commission is soliciting comment on alternatives to the intake capacity level required in the CAT NMS Plan. The CAT NMS Plan requires that the Central Repository have an intake capacity of twice historical peak daily volume measured over the most recent six years and the ability to handle peaks beyond this Baseline level for short periods.[1289] In setting this requirement, the Participants could have selected any number of alternative intake capacity standards.

The Commission performed an analysis using MIDAS data and determined that, for equities, the daily message traffic volume would exceed two times the maximum daily message volume from the previous six years (2010 through 2015) with a probability of 0.033%, which amounts to the intake exceeding capacity levels about once every 8⅓ years. Message volume measures all equity messages, including orders, order updates, executions and cancellations, from MIDAS exchange direct feeds, consolidated SIP feeds, and a small portion of the FINRA ATS feed.[1290]

The Commission preliminarily believes that intake capacity level is likely to be a primary cost driver for the Central Repository.[1291] In selecting a standard, there is a trade-off between additional cost for constructing and operating the Central Repository and the risk that increased volume could exceed the Central Repository's capacity. If the capacity were exceeded, the Commission preliminarily believes that regulators' access to CAT Data could be significantly delayed. The Commission is cognizant that periods of heavy market activity are more likely to be periods with market events that would require regulatory investigation, so the risk that the Central Repository might not be able to provide timely access to data when it is most needed is concerning.

[1286] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.2(c).

[1287] *Id.* at Appendix C, Section A.1(b).

[1288] *See* Section IV.E.2, *supra*.

[1289] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 1.1.

[1290] The Commission collected daily message volume from MIDAS for six years (January 1, 2010 through November 19, 2015) and found that August 10, 2011 generated the highest message traffic with 8.6 billion messages. A Box-Cox transformation was applied to the data to fit it into a normal distribution. Using a probability density function to fit the transformed data into a normal distribution, the Commission found the probability that the daily message volume would exceed 17.2 billion (twice the maximum) messages is 0.033%. The MIDAS data used are all equity messages between 4 a.m. and 7 p.m. on trading days—including orders, order updates, executions, and cancellations—from exchange direct feeds, consolidated SIP feeds, and a small portion of the FINRA ATS feed. MIDAS does not receive messages before 4 a.m. and after 7 p.m. from its feed sources. The data is missing AMEX feeds from January 1, 2010 through October 4, 2010; however, on average AMEX messages represent only 0.26% of daily message volume from all feeds.

[1291] Transactional volume and the growth in transactional volume is likely a primary driver of the costs of the Central Repository. *See* Section IV.F.1.a, *supra*. The Commission believes that higher transactional volumes require higher intake capacity levels, higher storage capacity, and higher processing capacity.

The Commission is soliciting comment on requiring a different intake capacity level. Alternative intake capacity levels would result in costs and benefits that depend on the specific alternative capacity level and whether it is higher or lower than the proposed level. For an alternative with a lower intake capacity level, such as 1.5 times the historic peak capacity level, the cost of creating and operating the Central Repository might be lower, but the risk that the Central Repository would be unable to meet regulator's data needs would be higher than under the CAT NMS Plan, particularly following events similar to the Flash Crash and August 24th, which created both a high volume of trading records and a high demand for timely regulatory analysis.

An alternative with a higher required intake capacity level, such as 3 times the historic peak capacity level, would likely entail higher costs than the CAT NMS Plan, but higher intake capacity levels would reduce the risk of the Central Repository being unable to meet regulators' data needs and thus increase the benefits of the Plan.

The CAT NMS Plan does not provide sufficient information for the Commission to quantify the cost difference between alternative intake capacities and the intake capacity in the CAT NMS Plan and there are no analogous projects of this scope with publicly-available data from bidding or otherwise from which the Commission could extrapolate.

3. Alternatives to the Scope of Certain Specific Elements in the CAT NMS Plan

The Commission notes that Rule 613 sets forth the minimum elements the Commission believes are necessary for an effective consolidated audit trail.[1292] The Commission also notes that it adopted these elements after notice and comment, including analyzing comment letters submitted in response to the Rule 613 Proposing Release.[1293] Moreover, the Participants, pursuant to Rule 613, analyzed and proposed for inclusion in the CAT NMS Plan certain elements after consultation with their members, the Bidders and the DAG.[1294]

While the Commission and the SROs have previously analyzed Rule 613, including the elements to be included in the CAT NMS Plan, the Commission now has the Plan, together with the cost and alternatives analysis provided by the Participants. The Commission has reviewed the Plan, including the cost estimates, and has performed its own economic analysis of the Plan. With the benefit of having reviewed and analyzed the Plan, the Commission believes that it is reasonable to solicit comment on alternatives to the scope of certain elements of the CAT NMS Plan because these alternatives could impact the cost and benefits of CAT, and given the passage of time, there may be market developments that could affect those costs and benefits that should be evaluated. These alternatives include: (1) Not requiring certain data fields that are currently required by the Plan; (2) requiring the Operating Committee to consider including more primary market transactions than it would otherwise be required to consider under the Plan; (3) removing from the Plan the OTC Equity Securities recording and reporting requirements; and (4) excluding certain Customer information periodic update requirements.

a. Data Fields

Rule 613 provides that the Plan must require the reporting of certain data fields.[1295] It also gives discretion to the Participants to require the reporting of data fields beyond the minimum set of fields mandated by Rule 613.[1296] The Commission is soliciting comment on whether there should be changes to the data fields that would be subject to CAT reporting. Specifically, the Commission is soliciting comment on whether any data fields that would be subject to CAT reporting under the Plan should be excluded.

The Commission is soliciting comment on whether any data fields that would be subject to CAT reporting under the Plan should be excluded. For example, Rule 613 required the Plan to include a unique customer identifier. As discussed further in Section IV.H.1 above the Commission granted the Participants an exemption from certain requirements in Rule 613 so that the Plan could include an approach whereby each broker-dealer would assign a unique Firm Designated ID to each trading account, which would be linked to a set of identifying information.[1297] The Commission preliminarily believes that this approach would reduce the costs of requiring the customer identifier as compared to the Rule 613 approach.[1298]

As an alternative, the Commission could eliminate the requirement to report customer identifiers. In the Adopting Release, the Commission recognized that the implementation of the unique customer identifier requirement might be complex and costly, and that the reporting of a unique customer identifier would require SROs and their members to modify their systems to comply with the Rule's requirements.[1299] While the Commission preliminarily believes that eliminating the customer identifier would reduce certain costs to industry associated with the implementation and operation of CAT as compared to the Plan as filed, without providing any additional material information, the Commission preliminarily believes that such a change would limit the benefits of the Plan significantly. As the Commission noted in the Adopting Release for Rule 613, unique customer identifiers are vital to the effectiveness of the consolidated audit trail, and the inclusion of unique customer identifiers would greatly facilitate the identification of the orders and actions attributable to particular customers and thus substantially enhance the efficiency and effectiveness of the regulatory oversight provided by the SROs and the Commission. Further, without the inclusion of unique customer identifiers, many of the potential benefits of a consolidated audit trail would not be achievable.[1300]

The Commission could also consider the alternative of excluding the allocation time field from reporting requirements in the Allocation Reports. Although this field is not currently required for recordkeeping, some broker-dealers do already retain allocation time information at the subaccount level in their trade blotters, though the Commission does not have precise information on the prevalence of this practice. The Commission preliminarily believes that removing allocation time would significantly reduce the benefits of the Plan because regulators currently undergo significant difficulties to obtain allocation times and the allocation times would be useful for enforcement investigations.[1301] At the same time, given the uncertainty in the current practices and the lack of information on the costs of this field in the Plan, the Commission is not sure how significant the cost savings of excluding the allocation time field would be. The Commission preliminarily believes that the substantial benefits of having allocation time at the subaccount level available and relatively accessible for regulatory activities warrants the costs associated with requiring CAT Reporters to include this field in CAT Data and that these costs would be significantly mitigated to the extent that CAT Reporters already retain this information.

[1292] *See* Adopting Release, *supra* note 9.

[1293] *See id.*

[1294] *See* CAT NMS Plan, *supra* note 3.

[1295] *See* 17 CFR 242.613(c)(7).

[1296] *Id.*

[1297] Using the Firm Designated ID and the other information identifying the Customer that would be reported to the Central Repository, the Plan Processor would then assign a unique Customer-ID to each Customer. Upon original receipt or origination of an order, broker-dealers would only be required to report the Firm Designated ID on each new order, rather than using the Customer-ID. *See* Exemption Order, *supra* note 18, at 14–15. Because the Plan Processor would still assign a Customer-ID to each Customer under the Customer Information Approach, the SROs are not requesting an exemption from Rule 613(j)(5).

[1298] *See* Section IV.H.1.b, *supra*.

[1299] *See* Adopting Release, *supra* note 9, at 45756.

[1300] *Id.*

The Plan requires both the CAT-Reporter-ID for the broker-dealer routing an order and the CAT-Reporter-ID for the broker-dealer receiving a routed order to be reported to the Central Repository, both when the order is routed and again when the routed order is received. The Commission could eliminate the requirement to report the CAT-Reporter-IDs when the routed order is received. However, while the Commission preliminarily believes this might reduce the CAT Reporting burden on some broker-dealers as compared to the Plan as filed, without providing any additional material information, the Commission noted in the Adopting Release that it does not believe the information reported when the order is received would be duplicative. Instead, the Commission noted that information regarding when a broker-dealer received a routed order could prove useful in an investigation of allegations of best execution violations to see if, for example, there were delays in executing an order that could have been executed earlier.[1302] In addition, the Commission notes that if a market participant is required to report when it receives an order, regulators could solely rely on information gathered directly from that market participant when examining or investigating the market participant.[1303] The Commission also noted that it relies on such data to improve its understanding of how markets operate and evolve, including with respect to the development of new trading practices, the analysis and reconstruction of atypical or novel market events, and the implications of new market dynamics.[1304]

The Commission preliminarily believes that, with respect to the reporting of data fields required by Rule 613, the analysis in the Adopting Release is still applicable and the elimination of these data fields from the Plan would result in a failure to achieve many of the significant potential benefits of the Plan. However, as noted above, the costs or benefits of including particular fields in the Plan as filed, may have changed due to technological advances and/or changes in the nature of markets since Rule 613 was adopted. The Commission is therefore soliciting comment on the benefits and drawbacks of eliminating these and any other required data fields from the Plan.

b. Primary Market Transactions

The CAT NMS Plan does not require the reporting of any primary market information to the Central Repository. However, as required by Rule 613(i), the CAT NMS Plan commits to incorporating a discussion of how and when to implement the inclusion of some primary market information into a document outlining how additional Eligible Securities could be reported to the Central Repository (the "Discussion Document"), which would be jointly provided to the Commission within six months after effectiveness of the Plan.[1305] Additionally, as required by Rule 613(a)(1)(vi), the Plan includes a discussion of the feasibility, benefits and costs of including primary market transactions in the CAT NMS Plan.[1306]

In its discussion of primary market transactions, the CAT NMS Plan states that including some primary market allocation information in the CAT NMS Plan would provide significant benefits without unreasonable costs, while other allocation information would provide marginal benefits at significantly higher cost.[1307] Specifically, the discussion in the CAT NMS Plan divides the primary market allocation information into two categories: Top-account allocations and subaccount allocations. Top-account allocations refer to allocations during the book-building process to institutional clients and retail broker-dealers. These allocations are conditional and can fluctuate until the offering syndicate terminates. Top-account institutions and broker-dealers make the subsequent subaccount allocations to the actual accounts receiving the shares. The Plan concludes that, with respect to primary market information, only the subaccount allocations would provide significant benefits without unreasonable costs if they were to be incorporated into the CAT.

Based on that discussion, the Plan states that "the Participants are supportive of considering the reporting of Primary Market Transactions, but only at the subaccount level, and would incorporate analysis of this requirement, including how and when to implement such a requirement, into their document outlining how additional Eligible Securities could be reported to the Central Repository, in accordance with SEC Rule 613(i) and Section 6.11 of the Plan." [1308] The Plan therefore would limit the discussion of reporting primary market transactions in the Discussion Document to the subaccount level. As an alternative to the approach in the Plan, the Commission is soliciting comment on whether to broaden the required scope of the discussion of primary market allocation information in the Discussion Document to include an analysis of incorporating both top-account and subaccount information for primary market transactions into the CAT. The Commission preliminarily believes that the potential benefits of including top-account information in the CAT could be significant and that the costs of including top-account information could be lower than what is described in the CAT NMS Plan and appropriate in light of significant potential benefits. For these reasons, the Commission preliminarily believes that top-account information should not be excluded from the Discussion Document.

Some primary market information is currently available to regulators. FINRA collects primary market allocation information on the initial and final list of distribution participants in their Distribution Manager. Based on discussions with Participants, the Commission understands that issuers of IPOs are required to report primary market allocations to broker-dealers within the Distribution Manager, but reported information does not contain broker-dealer customer information on those allocations. Primary market allocations to market participants other than broker-dealers can be voluntarily reported to the system. FINRA uses this system in the course of investigations in response to complaints and in normal examinations of broker-dealers. The Commission can request data from the Distribution Manager. When the Commission or an SRO needs additional primary market information, they request it from underwriters and other broker-dealers in the offering process. These ad hoc data requests can take weeks for underwriters to process and, if requesting data from multiple underwriters or other broker-dealers, each could submit the data in a different format or with different data definitions, adding time to the process of combining the data across underwriters.

[1301] *See* Section IV.E.1.a, *supra.*

[1302] *See* Adopting Release, *supra* note 9, at 45763.

[1303] *Id.*

[1304] *Id.*

[1305] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9. Section 6.11 of the Plan satisfies a requirement in 17 CFR 242.613(i) to plan for expansion.

[1306] 17 CFR 242.613(a)(1)(vi); CAT NMS Plan, *supra* note 3, at Appendix C, Section A.6.

[1307] *See id.* at Appendix C, Section A.6(b)–(c).

[1308] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.6(c).

Primary market information currently assists regulators in examining underwriting practices and surveilling for violations of regulations regarding allocations in primary offerings. The information also is useful for conducting market analysis and research on policy issues such as allocation decisions, flipping, and secondary market price support and the analysis and reconstruction of market events such as the Facebook IPO or the Vonage IPO.[1309]

The Commission preliminarily believes that including both top-account and subaccount allocation information for primary market transactions in CAT would make primary market information that identifies customers directly accessible to regulators, which would be beneficial. In particular, top-account information in addition to subaccount information would be necessary to surveil, without requesting data from underwriters, for prohibited activities in the book-building process and would improve the efficiency of investigations into such prohibited activities. For example, including top-account information in CAT Data would provide regulators efficient access to data relevant for investigations into tie-in arrangements because regulators would be able to correlate treatment in the primary offering with other trading activity to see if, for example, those who trade more in the aftermarket receive more of the initial public offering shares they request than others. Including such information in CAT Data would also provide efficient access to data that could identify potential allocations that preference some customers over others in the IPO allocation process because the SROs and Commission could examine the relationship between IPO initial allocations, initial indications of interest, and fluctuations in allocations and indications of interest during the book-building process. In the Adopting Release, the Commission noted several additional benefits of collecting top-account information in addition to subaccount information for primary market transactions. For example, examinations of "spinning," "laddering," and other "quid pro quo" arrangements would benefit from efficient access to such CAT Data, which would facilitate a comparison of those customers allocated shares in an offering to those who are not allocated shares in an offering and how the conditional allocations change during the book-building process. Book-building information, which is currently very difficult for regulators to assemble, would provide very useful insights into IPO and follow-on allocations in market analysis. Such insights would better inform rulemaking and other policy decisions.

The CAT NMS Plan estimates that for broker-dealers to implement a system to record and report top-account and subaccount allocation information for primary market transactions would take 36 months of staff time per firm at a cost of $234.8 million whereas just subaccount information would take 12 months of staff time per firm at a cost of $58.7 million.[1310] The inclusion of top-account allocation information accounts for the difference of $176.1 million. The CAT NMS Plan explains that including top-account information in the CAT would result in higher implementation costs because the top-account information is maintained in book-building systems in investment banking divisions of broker-dealers that differ fundamentally from secondary market systems.[1311]

However, the Commission preliminarily believes that the costs of adding top-account allocation information may be lower than those estimated in the CAT NMS Plan, for several reasons. First, in combination with an alternative that would require less granular time stamps or a larger allowable clock offset on less time-sensitive systems, the costs for top-account information would be lower than indicated in the Plan. The Commission recognizes that the benefits from time stamp granularity and clock synchronization in the systems for reporting top-account information may be lower than those for secondary market systems because activity occurs far less frequently than it does on exchanges and regulators may not need to sequence primary market transactions relative to secondary market transactions within a second. The Commission is unable to estimate cost savings from alternative clock synchronization requirements because estimates presented in the Plan do not cite these specific costs. Second, the Plan's estimate is sensitive to the number of underwriters. In particular, the estimates assume 250 underwriters would need to implement changes to provide for top-account allocation information for primary market transactions.[1312] This is also the same number of underwriters assumed to need to implement subaccount allocation information. However, the Commission suspects that the number of underwriters that would need to implement changes for top-account information may be lower than the number that implement subaccount information for primary market transactions because the lead underwriters could have all of the information necessary to report the top-account information. If so, then only those underwriters that expect to lead an offering would need to implement systems changes to report top-account allocation information. Estimating costs only for lead underwriters could result in a much smaller estimate.

The Commission does not have an estimate of the ongoing costs of underwriters reporting top-account information. However, the Commission preliminarily estimates an average of approximately 120 IPOs each year and 340 follow-on offerings each year from 2001 to 2014. Assuming each offering contains approximately 260 initial allocations, including all indications of interest, with 10 amendments from initial allocation to final allocation, each offering would generate 2,600 CAT Reportable Events for a total of 1.2 million per year.[1313] This total is much smaller than the number of Reportable Events in the secondary market (trillions). Therefore, while the Commission cannot estimate the costs of ongoing primary market reporting, the Commission believes the ongoing costs of reporting primary market transactions would be a fraction of the ongoing costs of secondary market reporting and would likely be supported by staff already engaged to maintain CAT reporting.

[1309] *See* Reena Aggarwal, *Allocation of Initial Public Offering and Flipping Activity,* 68(1) Journal of Financial Economics 111–135 (2003); Reena Aggarwal, Manju Puri and N. Prabhala, *Institutional Allocation in Initial Public Offerings: Empirical Evidence* 57 (3) Journal of Finance 1421–1442 (2002); Raymond P. Fishe, *How Stock Flippers Affect IPO Pricing and Stabilization,* Journal of Financial and Quantitative Analysis 319–339 (2002); and Raymond P. Fishe, Ekkehart Boehmer, *Underwriter Short Covering in the IPO Aftermarket: A Clinical Study,* Journal of Corporate Finance, 575–594 (2004). For background information on the Facebook IPO, *see* SEC Press Release, SEC Charges NASDAQ for Failures During Facebook IPO (May 29, 2013), *available at http://www.sec.gov/News/PressRelease/Detail/PressRelease/1365171575032.* For background information on the Vonage IPO, *see* FINRA, FINRA Fines Citigroup Global Markets, UBS and Deutsche Bank $425,000, Orders Customer Restitution for Supervisory Failures in Vonage IPO (September 22, 2009), *available at http://www.finra.org/newsroom/2009/finra-fines-citigroup-global-markets-ubs-and-deutsche-bank-425000-orders-customer.*

[1310] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.6(c). The estimated costs reflect the implementation cost of systems development needed to support top-account and subaccount information for primary market transactions to CAT. The $234.8 million figure assumes 36 months of staff time, with 21.741 days per month at a $1200 daily FTE rate for 250 firms. The $58.7 million figure assumes 9 months of staff time, with 21.741 days per month at a $1200 daily FTE rate for 250 firms. The estimates do not include any ongoing annual costs to maintain the reporting; the Commission assumes that these systems would be supported by staff already engaged to support CAT reporting.

[1311] *Id.* at Appendix C, Section A.6(a).

[1312] *See* Cost Estimate for Adding Primary Market Transactions into CAT (February 17, 2015), *available at http://www.catnmsplan.com/industryfeedback/p602480.pdf.*

The Commission also recognizes that including top-account information in the CAT NMS Plan could change the competitive landscape of the market for underwriting services. In particular, some underwriters may choose to exit the market instead of report top-account information. The Commission preliminarily believes that the compliance costs themselves would be low compared to underwriting fees.[1314] Nonetheless, the Commission recognizes that some underwriters may exit rather than comply with the CAT NMS Plan requirements. Likewise, the Commission recognizes that the costs to implement CAT reporting of top-account allocation information could increase barriers to entry.

Finally, the Commission recognizes that requiring top-account information in the CAT NMS Plan could alter the way underwriters conduct their book-building activities. The Commission is not sure if these changes would be beneficial or harmful to issuers and investors. For example, issuers and investors could benefit if including top-account information in CAT deters book-building activity that violates Regulation M or FINRA Rule 5110, 5130 or 5131, though some particular investors may lose any gains from preferential treatment. However, the Commission is uncertain whether investors and issuers would benefit if underwriters altered their book-building activity in an effort to reduce their reporting burden. For example, if reporting every change to a conditional allocation proved cumbersome, underwriters may choose to update preliminary allocations less often. This could change the way that underwriters and investors interact with each other in the book-building process with implications for the potential success of the offering or investors' satisfaction with the outcome.

c. OTC Equity Securities

The CAT NMS Plan requires the reporting of data regarding OTC Equity Securities upon implementation of the CAT NMS Plan. The Commission is soliciting comment on the alternative of eliminating the requirement to report activity in OTC Equity Securities from the CAT NMS Plan, and instead requiring only that the SROs include a discussion of how OTC Equity Securities could be incorporated into the CAT in the Discussion Document that they are required to provide within six months after the effective date of the Plan pursuant to Rule 613(i).[1315] This was the approach taken with respect to OTC Equity Securities in Rule 613, because the Commission believed that limiting the scope of the CAT to NMS securities was a reasonable first step in implementing the CAT.[1316] Under this approach, the CAT NMS Plan would require each national securities exchange and national securities association, within six months after effectiveness of the national market system plan, to jointly provide to the Commission a document outlining in detail how OTC Equity Securities (along with certain other categories of securities) could be incorporated into the CAT information, including an implementation timeline and a cost estimate. The Commission preliminarily believes that excluding OTC Equity Securities from the CAT upon implementation would reduce costs of the CAT NMS Plan. But, the Commission also preliminarily believes that removing the requirement to report activity in OTC Equity Securities from the CAT NMS Plan would limit the regulatory benefits of the CAT NMS Plan significantly.

Under the alternative approach, OTC Equity Securities would be excluded from the Plan upon implementation. While they could still be incorporated into the Plan following the submission of the Discussion Document, the alternative approach would create uncertainty as to whether or not OTC Equity Securities would ultimately be incorporated into CAT NMS Plan and the timeline for that process.

Excluding OTC Equity Securities from the CAT NMS Plan could limit oversight of the OTC equity market relative to the oversight obtainable under the Plan.[1317] FINRA currently collects reports on OTC equity markets in its OATS data.[1318] The primary difference between OATS and CAT Data for OTC Equity Securities would be in completeness, due to the additional data fields in CAT Data that are not in OATS, particularly Customer-ID; in any accuracy improvements relative to OATS; in direct access for the Commission; and in the timeliness relative to OATS, particularly in having linked data that requires less time to process. Relative to the Plan, therefore, excluding OTC Equity Securities could reduce the efficiency and effectiveness of regulators overseeing the OTC market, conducting investigations of manipulation, pump and dumps, and improper penny stock sales. It could also reduce the efficiency of estimating disgorgement payments to harmed investors relative to the Plan.

The CAT NMS Plan states that including OTC Equity Securities could facilitate the retirement of OATS.[1319] If OTC Equity Securities are not included in the CAT NMS Plan upon implementation, including OTC Equity Securities at a later time would require an amendment to the CAT NMS Plan, which could take significant time and potentially delay the retirement of OATS.[1320] The Commission is cognizant that the period of duplicative reporting, during which both CAT and OATS would be reported by market participants, is likely to impose a significant cost on industry.[1321] The CAT NMS Plan states that the inclusion of OTC Equity Securities at CAT implementation is generally supported by industry to facilitate the retirement of OATS.[1322]

[1313] The Commission estimated the number of allocations per offering by averaging the data for the 11 IPOs made public along with an academic paper. *See* Jay R. Ritter and Donghang Zhang, *Affiliated Mutual Funds and the Allocation of Initial Public Offerings*, 86(2) Journal of Financial Economics 337–368 (2007) and *http://bear.warrington.ufl.edu/ritter/Allocation08282012.xls*. If the Commission assumes that each offering would generate 10 amendments to allocations prior to the subaccount allocations, there would be 2,600 reports per offering and 1.2 million reports per year using the number of offerings in 2014. If each offering instead generates 5 or 20 amendments, the number of reports per year would be 0.6 million or 2.4 million.

[1314] The primary market issued about $450 billion in common stock in 2014 and underwriters earned $5.2 billion in underwriting fees in 2014. This is high relative to the $176 million cost estimate above. The value of issuances comes from the Securities Data Corporation and information regarding the aggregate underwriting fees comes from FOCUS reports.

[1315] 17 CFR 242.613(i).

[1316] *Id.; see also* Adopting Release, *supra* note 9 at 45744. The Plan states that "[e]ven though SEC Rule 613 does not require reporting of OTC Equity Securities, the Participants have agreed to expand the reporting requirements to include OTC Equity Securities to facilitate the elimination of OATS." *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9.

[1317] The Commission has discussed the potential for fraudulent activity in the OTC market. *See* SEC, Microcap Fraud, *available at http://www.sec.gov/spotlight/microcap-fraud.shtml*.

[1318] *See supra* note 351 and related text.

[1319] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a) n.16.

[1320] The Commission notes, however, that the incorporation of OTC Equity Securities is not the only hurdle needed to retire OATS, and other hurdles may remain open even after any approval of the CAT NMS Plan. For example, the Plan anticipates a period of 12–18 months during which

The Commission preliminarily believes that excluding OTC Equity Securities from the CAT upon implementation would reduce certain costs associated with implementation and operation of CAT as compared to the Plan as filed, without providing any additional material information, because less data would be reported,[1323] therefore requiring fewer resources to implement and maintain the CAT. The Commission further preliminarily believes that CAT Reporters and the Central Repository would avoid certain compliance costs if OTC equities were excluded. To the extent that market participants rely on separate IT infrastructure to handle activity in OTC as opposed to listed securities, delaying the inclusion of OTC Equity Securities in CAT postpones costs associated with updating these systems. Postponing these system modifications may allow these modifications to be more efficiently integrated into other planned system upgrades, reducing costs to industry. The Commission notes that, even under this alternative approach, market participants still may incur these costs eventually, because the approach contemplates that the CAT NMS Plan could be expanded to require the reporting of order events in OTC Equities following the submission of the Discussion Document.

Furthermore, the Commission preliminarily believes that the cost savings from delaying incorporating OTC Equity Securities in the CAT NMS Plan are likely to be lower than the increase in costs of duplicative reporting that result from a delay to OATS retirement. Any broker-dealers that trade both OTC Equity Securities and listed equity or option securities would have to comply with the Plan regardless of the inclusion of OTC equities, so the cost savings to these broker-dealers from the exclusion of OTC Equity Securities may not be significant. The Commission preliminarily believes that the number of broker-dealers that trade only OTC Equity Securities is small. Finally, the Commission expects that the duplicative reporting costs would be fairly significant and that extending the time until the retirement of OATS would be a significant additional cost.

The Commission cannot estimate the amount of the cost reduction from excluding OTC Equity Securities because it lacks the data to do so. The CAT NMS Plan presents data only on the aggregate costs of on-exchange and OTC equity reporting; it does not present data on the costs specifically attributable to OTC equity reporting. The Commission has no data from which it can independently estimate the cost differential because it depends on information internal to each CAT Reporter (*e.g.,* how their systems would change for the alternative compared to the Plan), which is not compiled or stored anywhere, and to which the Commission therefore does not have ready access, and it depends on when OTC Equity Securities would otherwise be included and the status of OATS and other systems in the interim.

d. Periodic Updates to Customer Information

As noted above in Section IV.E.1.b(4), the Plan Processor is required to create a Customer-ID and map Firm Designated IDs to this Customer-ID so that records stored in the CAT Data link to the Customers. To facilitate this, the Plan requires CAT Reporters to submit an initial set of Customer information to the Central Repository and subsequent daily updates and changes to that Customer information.[1324] In addition to daily updates to reflect changes in Customer information required in Rule 613, the CAT NMS Plan also requires members to submit periodic full refreshes of all Customer information to the CAT.[1325] The Commission is soliciting comment on an alternative that would eliminate the requirement for periodic full refreshes.

The CAT NMS Plan states that the purpose of these refreshes is to "ensure the completeness and accuracy of Customer information and associations."[1326] Although the Commission believes that the Participants should ensure that customer information in the Central Repository is complete and accurate, the requirement for periodic full refreshes seems redundant if the initial list and daily updates are complete and accurate and would, therefore, provide no additional benefit. Further, not requiring these periodic refreshes could reduce the risk of a security breach of personally identifiable information. However, the Commission recognizes that periodic full refreshes of customer information could address any errors that are introduced in the daily update process, although the Commission preliminarily believes that such problems are likely to be quite rare. In addition, the Commission recognizes that not requiring the periodic full refreshes could reduce certain costs associated with implementation and operation of CAT as compared to the Plan as filed for CAT Reporters, although the Commission preliminarily believes that these cost reductions would be minor for two reasons. First, the quantity of data required to refresh the customer information table is very small compared to the size of market data files submitted regularly by most market participants. Second, because market participants would need to develop software and procedures to initially populate the customer information table, that software and procedure should be available to refresh the table periodically. Therefore, the Commission preliminarily believes that removing the requirements for periodic full refreshes of customer information could minimally reduce the cost of the Plan without materially reducing the benefits.

4. Alternatives to the CAT NMS Plan

The Commission is soliciting comment on the broad set of alternatives of modifying existing systems to reduce the data limitations described above instead of approving the CAT NMS Plan.

When it adopted Rule 613, the Commission noted that "the costs and benefits of creating a consolidated audit trail, and the consideration of specific costs as related to specific benefits, are more appropriately analyzed once the SROs narrow the expanded array of choices they have under the adopted Rule and develop a detailed NMS plan."[1327] The Commission also noted that a "robust economic analysis of . . . the actual creation and implementation of a consolidated audit trail itself . . .

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the SROs would analyze rules and systems to determine which require duplicative information. The process and timeline for elimination of duplicative reporting systems is discussed in Section IV.F.2, *supra.*

[1321] *See* Section IV.F.2, *supra.*

[1322] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section C.9.

[1323] For example, in February, 2016, the average daily number of trades in OTC securities is approximately 98,300, on an average of approximately 18,500 issues over that same period. While that volume of trades is not large, the number of distinct issues is.

[1324] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(a)(iii); Appendix D, Section 9.1.

[1325] *See id.,* at Appendix C, Section A.1(a)(iii) n.33.

[1326] *Id.*

[1327] *See* Adopting Release, *supra* note 9, at 45725–26.

requires information on the plan's detailed features (and their associated cost estimates) that will not be known until the SROs submit their NMS plan to the Commission for its consideration."[1328] Accordingly, the Commission deferred its economic analysis of the actual creation, implementation, and maintenance of the CAT until after submission of an NMS plan.

The Commission recognizes that approving the CAT NMS Plan is not the only available means of improving the completeness, accuracy, accessibility, and timeliness of the data used in regulatory activities. Alternatively, the Commission could mandate improvements to one or more existing data sources to address the data limitations noted in the Baseline Section. The Commission previously considered this set of alternatives when considering whether to adopt Rule 613.[1329] The Commission has now reviewed the CAT NMS Plan, including the cost estimates, and has performed its own economic analysis of the Plan. With the benefit of having reviewed and analyzed the Plan, the Commission is now soliciting comment on this set of alternatives.

As an alternative to the CAT NMS Plan, the Commission could require modifications to OATS. In the Adopting Release, the Commission noted that it had received comments suggesting various ways that the OATS system could be modified to serve as the central repository for the consolidated audit trail.[1330] However, the Commission also noted that OATS would require significant modifications in order to provide the attributes that the Commission deems crucial to an effective audit trail. In particular, OATS excludes some exchange-based and other types of non-member activity; it does not collect market-making quotes submitted by registered market makers (in those stocks for which they are registered); it is not a central repository and therefore does not presently provide other regulators with ready access to a central database containing processed, reconciled, and linked orders, routes, and executions ready for query, analysis, or download; it does not presently collect options data; it does not afford regulators an opportunity to perform cross-product surveillance and monitoring; and it does not collect information on the identities of the customers of broker-dealers from whom an order is received.[1331]

The Commission preliminarily believes that, as stated in the Adopting Release, the missing attributes identified above are crucial to improving the completeness, accuracy, accessibility, and timeliness of the data used in regulatory activities. Thus, any alternative to CAT based on OATS that does not address those deficiencies would limit the potential benefits of the alternative significantly. Given the modifications necessary, the Commission cannot estimate the potential cost savings, if any, from mandating an OATS-based approach as an alternative to the CAT NMS Plan, because the Commission does not have sufficient information to estimate the cost of modifying OATS to address some or all of these deficiencies, either separately or in combination. The Plan does not provide data on the cost of making each relevant modification to OATS, and the Commission has no other data from which it can independently estimate this, because the Commission is not aware of any such data currently available to it. The Commission notes, however, that Rule 613 provided flexibility to the SROs to propose an approach based on OATS and/or other existing data sources.[1332] Given that Rule 613 provided this flexibility to the SROs, the Commission preliminarily believes that the SROs could have utilized an OATS-based approach if that approach would have represented significant cost savings relative to the Plan's approach, and the SROs that operate those reporting systems had presented such a solution as a Bid. Furthermore, the Commission notes that an approach that modifies and expands OATS to satisfy the requirements of the CAT NMS Plan remains feasible under the current bidding process. The Commission seeks comment on the costs and benefits of requiring modifications to OATS as an alternative to the CAT NMS Plan.

Another alternative would be for the Commission to modify other data sources instead of, or in combination with, OATS. However, like OATS, all of the current data sources have limitations that would need to be addressed in order to provide the attributes that the Commission deems crucial to an effective audit trail.[1333] Furthermore, the Commission preliminarily believes that modifying any other single data source would be more costly than modifying OATS, which is currently the most comprehensive audit trail. While the Commission could require the modification of multiple data sources in combination, the Commission preliminarily believes that an alternative to the CAT NMS Plan that relied on multiple data sources, such as a combination of OATS, COATS, other SRO audit trail data and/or publicly available data, would eliminate the benefits associated with having a single, complete consolidated source from which regulators can access trade and order data, which the Commission considers to be very significant.[1334]

In summary, the Commission cannot estimate the potential cost savings, if any, from modifying one or more other data sources instead of, or in combination with, OATS, because the Commission does not have sufficient information to estimate the cost of modifying each of the currently available data sources to address their current limitations, separately or in combination. The Plan does not provide data on the cost of making each relevant modification to each current data source, and the Commission has no other data from which it can independently estimate this, because the Commission is not aware of any such data currently available to it.

However, the Commission preliminarily believes that mandating improvements to the completeness, accuracy, accessibility, and timeliness of current data sources without an NMS Plan that requires the consolidation of data and increased coverage across markets and broker-dealers would likely significantly limit the potential benefits, possibly without providing significant cost savings. The Commission seeks comment on the costs and benefits of modifying one or more currently available data sources, separately or in combination, as an alternative to the CAT NMS Plan.

5. Request for Comment on the Alternatives

a. Generally

383. Are there any other alternatives that the Plan should require? If so, please describe the alternative and the costs and benefits of the alternative relative to the Plan.

[1328] *Id.* at 45726.

[1329] *Id.* at 45739–41.

[1330] *Id.*

[1331] *Id.* at 45741.

[1332] *Id.* The Commission also notes that the current Plan could allow the Plan Processor to leverage some elements of the existing OATS infrastructure and/or other existing data sources in the implementation of the CAT.

[1333] The limitations of the various data sources are discussed in Section IV.D, *supra.*

[1334] These benefits are discussed in Section IV.E, *supra.*

b. Alternatives to the Approaches Permitted by the Exemption Order[1335]

384. Should the CAT NMS Plan require Options Market Makers to report their quotes to the Central Repository? Please explain. Do Commenters believe that the costs of the Rule 613 approach would be disproportionately borne by smaller broker-dealers? Why or why not? Please provide data supporting your position.

385. Should the Plan treat equity market makers the same as Options Market Makers for purposes of quotation reporting—*i.e.*, equity market makers report only Quote Sent Time and exchanges to which the quote is routed report the other information? Why or why not? What are the relative costs and benefits of this alternative? Please provide cost estimates.

386. Should the Plan require an alternative approach to reporting market maker quotes on exchanges where both equity and Options Market Makers would not need to report their quotation updates, and instead the exchanges would report Quote Sent Times in their reports of receiving these quotation updates? Why or why not? How would such an alternative affect the costs of building and operating the Central Repository? How would such an alternative affect market-maker costs of implementing and continuing CAT reporting?

387. Should the CAT NMS Plan require that Allocation Reports provide sufficient information for the Central Repository to be able to link those allocations to order lifecycles? What are the costs and benefits of providing this information? Please explain and provide cost estimates.

388. How do broker-dealers currently track which customers should receive allocations from which set of orders and how do broker-dealers ensure that those orders receive the correct average price? Can these same systems provide a key that could accurately link the allocations to lifecycles in many-to-many allocations? Please explain.

389. Should the CAT NMS Plan require an alternative to the Customer Information Approach? If so, what alternative should the Commission require and what are the relative costs and benefits of the alternative? Please explain.

390. Should the CAT NMS Plan require an alternative approach to assigning CAT-Reporter-IDs? If so, what alternative should the Commission require and what are the relative costs and benefits of the alternative? Please explain.

391. Should the CAT NMS Plan provide for the use of the LEI or another unique identification code as an alternative to the CAT-Reporter-ID? What are the advantages and disadvantages of this approach?

392. Should the CAT NMS Plan require an alternative to the requirement to time stamp manual orders to the second? If so, what alternative should the Commission require? For example, should the Plan require millisecond time stamps or one-minute time stamps? Please explain and provide information on the relative costs and benefits of the alternatives.

c. Alternatives to Certain Specific Approaches in the CAT NMS Plan[1336]

393. Should the "industry standard" for the purposes of the clock synchronization and time stamping be "one-size-fits-all"? Please explain. If not, how should the CAT NMS Plan structure variations in clock synchronization and time stamp requirements that are based on industry practices?

394. Should the "industry standard" for the purposes of the clock synchronization and time stamping requirements be defined based on industry practice? Please explain. If not, how should "industry standard" be defined? Should the "industry standard" consider information other than current industry practice, such as the most accurate technology currently available in the industry, or the standard recommended by a particular industry group or authority? Could a definition of "industry standard" set a maximum clock offset threshold with an expectation that each CAT Reporter would be responsible for smaller clock offsets if the CAT Reporter is technically capable of such clock offsets? Please explain and include information on the relative costs and benefits of such alternative definitions.

395. What benefits, if any, would derive from applying the same uniform clock synchronization standards to all market participants versus applying different standards to different participant types? Which approach is preferable? If applying different standards to different participant types, which participant types should have smaller clock offset tolerances and which should have larger clock offset tolerances and what are the industry standards for those participant types? Please explain and provide any supporting data.

396. Do Commenters agree with the Commission's cost estimates for clock synchronization alternatives? Are there CAT Reporters other than broker-dealers that would incur significant costs from increasing clock synchronization standards to allowable clock drifts of less than 50 milliseconds, such as 1 millisecond or 100 microseconds? At what level of clock synchronization would these costs become material? Please explain. Do Commenters have estimates of these costs?

397. Does the FIF Clock Offset Survey reflect the operational capabilities of all potential CAT Reporters? Please explain.

398. Do Commenters agree that an alternative that would relax the logging requirements such that CAT Reporters would only need to log exceptions and resulting synchronization events (and not every synchronization event) would reduce costs of the CAT NMS Plan without materially reducing its benefits? Why or why not? Do Commenters have an estimate of how much such an alternative would reduce costs, either in isolation or in combination with the alternative to not require synchronization outside of event recording times? Please provide supporting documentation for these estimates.

399. Is there a need for clock synchronization standards outside of regular and extended trading hours? Is clock synchronization beneficial for retail orders that come in overnight? Are there examples of times or events outside of regular and extended trading hours when clock synchronization is more beneficial? Do Commenters agree that an alternative that would not require synchronizing clocks outside of times when servers record Reportable Events would reduce costs of the Plan without materially reducing its benefits? Do Commenters have an estimate of how much such an alternative would reduce costs? Please explain and provide supporting documentation if possible.

400. Are some CAT Reportable Events more time-sensitive than other events? If so, what events are more time-sensitive and why? What systems are more likely to process these events, and where are those systems located (*i.e.*, within broker-dealers, service bureaus, Execution Venues)? Please explain.

401. What market participant systems, if any, should have smaller clock offset tolerances? Why? What clock

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[1335] *See also* Sections III.B.5–III.B.9, *supra*, for additional requests for comment on the alternative Rule 613 approaches to the approaches the Exemption Order allowed to be included in the CAT NMS Plan.

[1336] *See also* Sections III.B.2, III.B.4, III.B.10, III.B.11, *supra*, for additional requests for comment related to alternatives to certain specific approaches in the CAT NMS Plan.

synchronization standard should these systems have? Why? What market participant systems, if any, should have smaller clock offset tolerances? Why? What clock offset tolerances should these systems have? Why?

402. Should the Plan require time stamps to be reported more granularly than the one millisecond required in the Plan? If so, what standard should be required? Do Commenters agree with the Commission's analysis of the costs and benefits of requiring finer time stamp resolution than 1 millisecond? Please explain.

403. Should the CAT NMS Plan require different Error Rates in CAT? For example, should the Plan require a lower initial Error Rate? If so, what initial Error Rate should the Plan require and why? What would be the costs and benefits of requiring a lower initial Error Rate? Should the Plan require a lower Error Rate at some time period after implementation? If so, what Error Rate should the Plan require and why and when? What would be the costs and benefits of requiring a lower Error Rate?

404. Should the CAT NMS Plan require a day T+5 error correction deadline instead of a day T+3 error correction deadline? What are the relative costs and benefits of different error correction deadlines? Please explain and provide cost estimates.

405. Should the CAT NMS Plan require an alternative to the funding model in which broker-dealers and Execution Venues pay fees on the same fee schedule? If so, how would that funding model be structured and what metric would determine the fee level? How would that funding model affect the costs and benefits of the Plan, including the effect on competition? Please explain.

406. The Plan cites "transactional volume" as a cost driver for the Central Repository, but uses "message traffic" to allocate Central Repository costs across Industry Members. Do Commenters agree with the Commission's assumption that these two metrics are highly correlated? Is one of these metrics preferable for allocating costs across Industry Members? Please explain.

407. Should the CAT NMS Plan require alternative metrics to the message traffic and market share metrics required by the Plan for determining the tiers of the funding model but still place Execution Venues on a different fee schedule than broker-dealers? If so, which metrics? How would these alternative metrics affect the costs and benefits of the Plan, including effects on competition? Could these alternative metrics create conflicts of interest? Please explain.

408. Do Commenters agree with the Commission's analysis of unified versus bifurcated funding models? Why or why not?

409. Should the Plan require a unified funding model wherein Central Repository costs are allocated across all market participants by message traffic? Why or why not?

410. Should the Plan require a unified funding model wherein the tiers of the funding model for all CAT Reporters would be based on market share of share volume? Why or why not?

411. Should the Plan require a unified funding model wherein a fixed fee is levied on every trade? Why or why not? Could such a funding model reduce implementation costs by utilizing infrastructure already in place to assess Section 31 fees?

412. Should the Plan require a bifurcated funding model wherein Central Repository costs are allocated across broker-dealers by market share of share volume? Why or why not?

413. Should the Plan require a bifurcated funding model wherein Central Repository costs treat ATSs as part of broker-dealers only, instead of including them as Execution Venues? Why or why not?

414. Should the Plan require a bifurcated funding model wherein broker-dealer message traffic to and from an ATS are not included in message traffic measures used to assess fees on broker-dealers? Why or why not?

415. Should the Plan require a bifurcated funding model wherein ATS volume is excluded from TRF volume for the purposes of assessing Execution Venue fees to operators of TRFs? Why or why not?

416. Should the Plan require a bifurcated funding model wherein TRFs are not counted as Execution Venues for purposes of assessing fees on Execution Venues? Why or why not?

417. Should the Plan require that profits or losses from operating the Central Repository be allocated across Participants by market share of share volume? Why or why not?

418. Should the Plan require a strictly variable, rather than tiered, funding model? Why or why not?

419. Should the CAT NMS Plan require any funding model alternatives that could result in ATSs and exchanges paying equivalent fees? If so, how should that funding model be structured and what metrics should determine the funding tiers? How would that funding model affect the costs and benefits of this alternative, including effects on competition? Could these alternatives create conflicts of interest and, if so, to what extent? Please explain.

420. How should the CAT NMS Plan distribute the profits and losses of the Company among Participants? What are the relative costs and benefits of alternative ways to divide the profits and losses among the Participants? Please explain.

421. Should the CAT NMS Plan require a strictly variable funding model in which the fees paid are a set percentage of message traffic or share volume instead of a tiered funding model in which fees are fixed for a tier that is determined by message traffic or market share of share volume? If so, how would that funding model be structured? What are the relative costs and benefits of that funding model, including the effect on competition? Please explain.

422. Should the CAT NMS Plan exclude the requirement to report listing exchange symbology and instead allow CAT Reporters to use existing symbologies? Please explain. Would excluding this requirement allow broker-dealers to report data to CAT without processing the data ahead of the report? Please explain. What would be the relative costs and benefits of removing this requirement from the Plan? Please provide any cost estimates.

423. Should the CAT NMS Plan require alternative minimum standards for access to the CAT Data to those proposed in the CAT NMS Plan? If so, what alternative minimum standards should the Commission require? For example, should the response time on the largest queries be longer or shorter than 24 hours? How would changes to the alternative minimum standards affect the costs and benefits of the Plan? Please be specific and provide cost estimates.

424. Should the CAT NMS Plan require an intake capacity level different from twice historical peak daily volume measured over the most recent six years? If so, what intake capacity level should the Plan require? What are the relative costs and benefits of this alternative intake capacity level?

425. The Plan proposes using a "daisy chain" approach for linking order events within the Central Repository.[1337] This approach was chosen in favor of an approach that would require a unique order ID to be assigned by the first market participant that receives an order, and that order ID to be passed to and used by any market participant that handles the order afterward (the "unique order ID"

[1337] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section A.1(b).

approach). Do Commenters believe that a unique order ID approach or any other alternative approach would produce more accurate linkages than a daisy chain approach or any other benefits? Please explain. According to the Plan, the daisy chain approach would minimize impact on existing OATS reporters because OATS already uses this type of linkage.[1338] Do Commenters believe that a unique order ID approach or any other alternative approach would increase the costs for CAT Reporters who currently report to OATS or have any other effect on the costs of the Plan? Please explain and provide estimates. Given that the Bids from potential Plan Processors all utilize the "daisy chain" approach, would adopting a unique order ID approach at this stage cause a significant disruption in the progress toward the implementation of a consolidated audit trail? Please explain. What would the costs of such a disruption be?

426. The CAT NMS Plan requires that the Plan Processor make use of a commercially available file management tool. What are the benefits to CAT Reporters from this requirement? Does this requirement have any effects on the competition between bidders? For example, are any bidders, such as those that could more efficiently use a proprietary file management tool, disadvantaged by this requirement? Please explain. Does this requirement affect the ability of the Operating Committee to replace an under-performing Plan Processor? Are there other costs or benefits of this requirement? Please explain.

d. Alternatives to the Scope of Certain Specific Approaches in the CAT NMS Plan

427. Should the CAT NMS Plan require excluding any data fields currently required to be included in the CAT Data (*e.g.*, unique customer identification, allocation time, and CAT-Reporter-IDs at both order routing and receipt)? If so, which ones? Please explain and provide information on the relative costs and benefits of excluding those data fields, including any cost estimates.

428. Should the CAT NMS Plan exclude primary market information? Why or why not?

429. Do Commenters agree with the analysis in the Plan of the feasibility, benefits, and costs of the inclusion of primary market information (including primary market transactions) in the CAT NMS Plan? Please explain.

430. Do Commenters have additional analysis relevant to the decision to include primary market information (including primary market transactions) in the CAT NMS Plan? If so, please describe that analysis, including any data.

431. Do Commenters agree with the Plan's decision to include subaccount allocation information for primary market transactions in the Discussion Document, which commits the Operating Committee to consider the implementation of this subaccount allocation information in the CAT NMS Plan? Please explain.

432. Do Commenters agree with the Commission's assessment of the costs and benefits of requiring top-account allocation information for primary market transactions? Please explain. Should the Operating Committee consider requiring top-account information? Please explain.

433. What are the implications of the SROs decision not to include top-account information for primary market transactions in the Discussion Document? Please explain.

434. Should the CAT NMS Plan exclude OTC Equity Securities? Please explain. Would the exclusion of OTC Equity Securities in the CAT NMS Plan delay the retirement of OATS? If so, by how long and what would be the added cost be? Please provide an estimate. What are the other costs and benefits of excluding OTC Equity Securities from the CAT NMS Plan?

435. The CAT NMS Plan requires that CAT Reporters provide periodic refreshes of all customer information to the Central Repository to maintain an accurate database of customer information. What intervals for updates would be appropriate and reasonable, and what information should be required to be updated? Should the CAT NMS Plan remove the requirement for periodic full submission of customer information beyond the daily updates sent when customer information changes? Please explain. Would broker-dealers reduce their costs if they did not have to report all customer information periodically? Would the removal of this requirement significantly reduce the risk of a security breach of personally identifiable information? Please explain.

e. Alternatives to the CAT NMS Plan

436. Do Commenters agree with the Commission's analysis of the broad alternatives to approving the CAT NMS Plan, such as modifying OATS and/or other data sources to meet the objectives of Rule 613? Please explain. Are there other alternative approaches that the Commission has not identified that it should consider? Please explain.

f. Alternatives Discussed in the CAT NMS Plan

The Commission recognizes that the Plan discusses many alternatives that the Commission does not analyze above, including alternatives in Consideration 12 therein. This Consideration (Rule 613(a)(1)(xii)) requires the Participants to discuss in the Plan any reasonable alternative approaches that the plan sponsors considered in developing the Plan, including a description of any such alternative approach; the relative advantages and disadvantages of each such alternative, including an assessment of the alternative's costs and benefits; and the basis upon which the plan sponsors selected the approach reflected in the CAT NMS Plan. Such discussions appear in Section 12 of Appendix C. The Commission reviewed these alternatives and has not included above a discussion of all of the specific alternatives addressed in the Plan. In some cases, the Commission, at this time, has no analysis to add beyond the analysis in the Plan. In other cases, the Plan does not require any specific alternative, so the Commission cannot analyze the effect on the Plan of selecting a different alternative. The Commission is soliciting comment on the alternatives discussed by the Participants in the Plan but not discussed above. The Commission requests comment on each of these alternatives, both in isolation and in combination, as well as any data that would assist the Commission in evaluating the costs and trade-offs associated with these alternatives.

437. Organizational Structure. According to the CAT NMS Plan, the Participants considered various organizational structures of the Bidders.[1339] The CAT NMS Plan notes that the Bidders have three general organizational structures: (1) Consortiums or partnerships (*i.e.*, the Plan Processor would consist of more than one unaffiliated entity that would operate the CAT), (2) single firms (*i.e.*, one entity would be the Plan Processor and that entity would operate the CAT as part of its other ongoing business operations), and (3) dedicated legal entities (*i.e.*, Plan operations would be conducted in a separate legal entity that would perform no other business activities). The CAT NMS Plan notes that each type of organizational structure has strengths and weaknesses but does not discuss those strengths and

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[1338] *Id.*

[1339] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(b).

weaknesses. The CAT NMS Plan concludes that the organizational structure should not be a material factor in selecting a bidder and does not mandate any specific organizational structure for the Plan Processor.[1340] The Commission requests comment on whether the CAT NMS Plan should mandate a particular organizational structure. Why or why not? How can the organizational structure of the Plan Processor affect the costs and benefits of the CAT NMS Plan? What are the relative strengths and weaknesses of the different organizational structures?

438. Primary Storage. The CAT NMS Plan states that bidders proposed two methods of primary data storage: traditionally-hosted storage architecture and infrastructure-as-a-service.[1341] The CAT NMS Plan does not mandate a specific method for primary storage, but does indicate that the storage solution would meet the security, reliability, and accessibility requirements for the CAT, including storage of PII data, separately. The CAT NMS Plan also indicates several considerations in the selection of a storage solution including maturity, cost, complexity, and reliability of the storage method. The Commission requests comment on whether the CAT NMS Plan should mandate a particular data storage method. Why or why not? How can the storage method affect the costs and benefits of the Plan? What are the relative strengths and weaknesses of the different primary storage methods?

439. Personally Identifiable Information. The CAT NMS Plan discusses several requirements to reduce the risk of misuse of PII, such as multi-factor authentication [1342] and Role Based Access Control for access to PII; [1343] separation of PII from other CAT Data; restricted access to PII; and an auditable record of all access to PII data contained in the Central Repository.[1344] The CAT NMS Plan notes that all bidders proposed some of these requirements, but only some bidders proposed others. The Commission requests comment on whether the Plan should mandate any/all of these requirements. The Commission further requests comment on the alternatives to these requirements. What are the potential alternative ways to protect PII? What are the costs and benefits of those alternatives compared to the Plan? Please provide estimates or other data to support answers.

440. Data Ingestion Format. The Plan discusses the trade-offs between requiring that the CAT Reporters report data to CAT in a uniform defined format or in existing messaging protocols.[1345] The Plan does not require either method. A uniform defined format would include the current process for reporting data to OATS. This is Approach 2 in the CAT Reporters Study.[1346] Several bidders proposed to leverage the OATS format and enhance it to meet the requirements of Rule 613. The Plan states that this could reduce the burden on certain CAT Reporters (*i.e.,* current OATS Reporters) and simplify the process for those CAT Reporters to implement the CAT.[1347] Accepting existing messaging protocols would allow CAT Reporters to submit copies of their order handling messages that are typically used across the order lifecycle and within order management processes, such as FIX. This is Approach 1 in the CAT Reporters' Survey.[1348] The Plan states that using existing messaging protocols could result in quicker implementation times and simplify data aggregation.[1349] The Plan further notes that the surveys revealed no cost difference between the two approaches,[1350] but that FIF members prefer using the FIX protocol.[1351] Should the Plan specify a particular approach? Please explain.

441. The Commission requests further information on the relative costs and benefits and strengths and weaknesses of these two data ingestion format approaches. Would either of these approaches produce more accurate data? For example, would using existing messaging protocols such as FIX be more accurate because CAT Reporters would send their messages without the possibility of adding errors when translating them to a different format? Alternatively, would using existing messaging protocols such as FIX be less accurate because the Central Repository would have to translate too many different and possibly bespoke formats into a uniform format for the CAT data? Would a hybrid approach produce the most accurate data? [1352] How else would the benefits of the CAT NMS Plan differ between these approaches?

442. The Commission requests comment on the implementation costs of these two data ingestion format approaches. The Commission expects that broker-dealers would need to modify existing messaging protocols to implement CAT regardless of which approach the Plan requires for reporting order events. What additional implementation costs would CAT Reporters incur to report using existing messaging protocols? What additional implementation costs would CAT Reporters, both OATS and non-OATS reporters, incur to report using a uniform defined format such as a modification of OATS format? In what ways would the implementation costs incurred at the Central Repository differ for the two approaches? What is the estimated cost of implementing each approach for CAT Reporters, Participants, and the Central Repository?

443. The Commission requests comment on the ongoing costs of these two data ingestion format approaches. How would ongoing costs be different for the two approaches? Would CAT Reporters need to process the order messages before reporting using existing messaging protocols to comply with requirements such as using the listing exchange symbology? If so, how costly is that processing? How costly is the processing required to translate order messages into a uniform defined format such as OATS format? What other ongoing costs associated with these approaches would CAT Reporters incur and how would they differ for the two approaches? How do the ongoing costs incurred by the Central Repository differ for the two approaches? Would the translation process from existing messaging protocols into a uniform format be more costly for the Central

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[1340] *Id.*

[1341] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(c). Traditionally-hosted storage architecture is a model in which an organization would purchase and maintain proprietary servers and other hardware to store CAT Data. Infrastructure-as-a-service is a provisioning model in which an organization outsources the equipment used to support operations, including storage, hardware, servers, and networking components, to a third party who charges for the service on a usage basis.

[1342] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(e). Multifactor authentication is a mechanism that requires the user to provide more than one factor (*e.g.,* biometrics/personal information in addition to a password) in order to be validated by the system. *Id.*

[1343] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(e). Role Based Access Control ("RBAC") is a mechanism for authentication in which users are assigned to one or many roles, and each role is assigned a defined set of permissions. *Id.*

[1344] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(e). Appendix D provides additional discussion of these PII requirements. *See id.* at Appendix D, Section 4.1–4.2.

[1345] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(A)(2); Section D.12(f). These are also called "Approach 1" and "Approach 2" in the Costs Section herein.

[1346] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(A)(2).

[1347] *Id.* at Appendix C, Section D.12(f).

[1348] *Id.* at Appendix C, Section B.7(b)(i)(A)(2).

[1349] *Id.* at Appendix C, Section D.12(f).

[1350] *Id.*

[1351] *Id.*

[1352] A hybrid approach would allow data to be submitted in either a uniform defined format or using existing messaging protocols.

Repository relative to putting reports submitted in a uniform defined format in a single dataset? Would the validation process associated with existing messaging protocols be more costly for the Central Repository than uniform defined format because of the complexity of validating data from many different and possibly bespoke messaging protocols? What are the estimated ongoing costs of each approach for CAT Reporters, Participants, and the Central Repository?

444. Process to Develop the CAT. Bidders proposed, and the Plan describes, several processes for development of the CAT: The agile or iterative development model, the waterfall model, and hybrid models.[1353] The CAT NMS Plan does not mandate a particular development process because any of the options could be utilized to manage the development of CAT.[1354] The CAT NMS Plan notes that the agile model is more flexible and more susceptible to the early delivery of software for testing and feedback, but that the agile model makes it more difficult to accurately estimate the effort and time required for development. The waterfall model would also facilitate longer-term planning and coordination among multiple vendors or project streams.[1355] The Commission requests comment on the strengths and weaknesses of each development process. The Commission further requests comment on whether the CAT NMS Plan should mandate a particular process and the impact on the relative costs and benefits of the mandating a particular process.

445. Industry Testing. The CAT NMS Plan requires a dedicated test environment that is functionally equivalent to the production environment and available 24 hours a day, six days a week.[1356] The CAT NMS Plan discusses alternative approaches for industry testing.[1357] Using the production environment for scheduled testing events on weekends or on specific dates would allow for realistic testing because multiple users are likely to test at the same time. However, CAT Reporters would not be able to test when it might be more convenient or less costly for them to test. The Commission requests comment on whether the Plan should mandate particular industry testing processes and the benefits and costs of these alternatives compared to the requirements of the CAT NMS Plan. How would either of these alternatives lead to more accurate data than the Plan? Would the alternatives otherwise affect the benefits of the CAT NMS Plan? How would either of these alternatives affect the costs of the CAT NMS Plan for CAT Reporters, Participants, and the Central Repository? Please provide estimates, if available.

446. Quality Assurance (QA). The CAT NMS Plan mentions several alternative approaches to quality assurance, but does not select a particular approach.[1358] In particular, the CAT NMS Plan states that the Participants considered many approaches, including continuous integration, test automation, and industry standards such as ISO 20000/ITIL. Although the Plan does not mandate a particular approach, certain requirements were detailed in the RFP.[1359] In addition, the CAT NMS Plan discusses the trade-offs associated with the QA staffing level.[1360] The Commission requests comment on whether the CAT NMS Plan should mandate a particular QA approach. Why or why not? If so, which approach should the Plan mandate? How can the QA approach affect the costs and benefits of the CAT NMS Plan? For example, how does the QA approach affect the accuracy and accessibility of the CAT Data? What are the relative strengths and weaknesses of the different quality assurance approaches?

447. User Support and Help Desk. The CAT NMS Plan discusses several alternatives related to how the Plan Processor provides a CAT Help Desk that would be available 24 hours a day, 7 days a week and be able to manage 2,500 calls per month.[1361] Specifically, alternatives relate to the number of user support staff members, the degree to which the support team is dedicated to CAT, and whether the help desk is located in the US or offshore. The CAT NMS Plan discusses the benefit and cost trade-offs,[1362] but does not mandate any of the particular alternatives. Instead, the CAT NMS Plan commits to considering each bidder's user support proposals in the context of the overall bid. The Commission requests comment on whether the CAT NMS Plan should specify the standards for user support. How would the various alternatives affect the benefits of CAT? How would the various alternatives affect the implementation costs of CAT? How would the various alternatives affect the ongoing costs of CAT for CAT Reporters, Participants, and the Central Repository? Please explain and provide estimates, if available.

448. CAT User Management. The CAT NMS Plan discusses several alternatives to manage users, but does not require a specific approach or standards.[1363] Specifically, the CAT NMS Plan discusses help desk creation of accounts, user creation (by broker-dealers or regulators), and multi-role solutions. Generally, there are trade-offs in terms of convenience and security in the approaches.[1364] The Commission requests comments on whether the CAT NMS Plan should specify an approach for user management. How would the various alternatives affect the benefits of CAT, such as accessibility? How would the various alternatives affect the implementation costs of CAT? How would the various alternatives affect the ongoing costs of CAT for CAT Reporters, Participants, and the Central Repository? How would the various alternatives affect the risk of a security breach or misuse of the CAT Data? Please explain and provide estimates, if available.

449. Required Reportable Events. The CAT NMS Plan states that the Participants considered requiring the reporting of multiple additional order event types, such as the "results order event" and the "CAT feedback order

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[1353] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(g). An agile methodology is an iterative model in which development is staggered and provides for continuous evolution of requirements and solutions. A waterfall model is a sequential process of software development with dedicated phases for Conception, Initiation, Analysis, Design, Construction, Testing, Production/Implementation and Maintenance. *Id.*

[1354] *Id.*

[1355] *Id.*

[1356] *See* CAT NMS Plan, *supra* note 3, at Appendix D, Section 1.2.

[1357] *See id,* at Appendix C, Section D.12(h).

[1358] *See id.,* at Appendix C, Section D.12(i).

[1359] *See* RFP, *supra* note 29, at 31. Specifically, the RFP requires that Bidders' responses include both the functional and non-functional testing that includes the following: System testing, integration testing, regression testing, software performance testing, system performance testing, application programming interface (API) testing, user acceptance testing, industry testing, interoperability, security, load and performance testing, and CAT Reporter testing.

[1360] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(i). Bidder QA staffing levels range from 2 to 90. *Id.*

[1361] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(j). The RFP specified these standards. *Id.*

[1362] *See id.* The Plan states that a larger support staff could be more effective, but would be more costly. Further, a dedicated CAT support team would have a deeper knowledge of CAT but would be more costly. Finally, a U.S.-based help desk could facilitate greater security and higher quality service, but would be more costly. *Id.*

[1363] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(k). User management is a business function that grants, controls, and maintains user access to a system. *Id.* at n.253.

[1364] *See id.* for more specific information on the relative strengths and weaknesses of each approach.

event."[1365] According to the CAT NMS Plan, a "results order event" type would not provide additional value over a "daisy chain" linkage method and a "CAT feedback order event" can be generated by the Plan Processor, making reporting by others unnecessary.[1366] The Commission requests comments on these additional order event types and any other order event types that the Plan might require. Should the CAT NMS Plan require additional order event types? What are these order event types and what distinguishes them from the required order event types? What would be the purpose of these order event types? Would they make the CAT Data more complete or more accurate? How would regulators use these event types? How much would these additional order event types cost to report, to validate, and/or to store? Are there any other costs associated with these additional order event types? Please provide estimates, if available.

450. Data Feed Connectivity. The Plan discusses requiring the collection of SIP data in real-time as opposed to through an end-of-day batch process.[1367] According to the Plan, real-time data would provide for more rapid access to SIP Data, but may require additional processing support to deal with out-of-sequence or missing records.[1368] Because CAT Reporters are only required to report order information on a next-day basis, the Plan does not require the Plan Processor to have real-time SIP connectivity. The Commission requests comments on whether the Plan should require a particular SIP connectivity. The Commission requests comment on the costs and benefits of requiring real-time SIP connectivity, or conversely, the costs and benefits of requiring end-of-day batch SIP connectivity (and not allow real-time). What would the Plan Processor do with real-time SIP data? Would the real-time SIP data be available to regulators, and if so, what would regulators do with that data? Do all regulators currently receive real-time SIP data? How much would the various SIP connectivity alternatives cost? How much processing would each alternative require to be of use to the Plan Processor or regulators?

I. Request for Comment on the Economic Analysis

The Commission has identified above the economic effects associated with the proposed CAT NMS Plan and requests comment on all aspects of its preliminary economic analysis. The Commission encourages Commenters to identify, discuss, analyze, and supply relevant data, information, or statistics regarding any such economic effects. Commenters should, when possible, provide the Commission with data to support their views. Commenters suggesting alternative approaches should provide comprehensive proposals, including any conditions or limitations that they believe should apply, the reasons for the suggested approaches, their analysis of the cost-benefit trade-offs of suggested approaches compared to the Plan, and their analysis regarding why their suggested approaches would satisfy the objectives of Rule 613. In particular, the Commission seeks comment on the following:

451. Do Commenters agree with the Commission's analysis of the potential economic effects of the Plan? Why or why not?

452. Has the Commission considered all relevant economic effects? If not, what other economic effects should the Commission consider?

453. Do Commenters have information that could help the Commission fill in gaps in the economic analysis related to a lack of information on details in the plan that could significantly affect the economic analysis? If so, please provide this information and explain how it could affect the economic analysis.

454. Do Commenters have data that could help the Commission fill in gaps in the economic analysis related to a lack of available data? If so, please provide this information and explain how it could affect the economic analysis.

455. Do Commenters believe that there are additional categories of benefits or costs that could be quantified or otherwise monetized? If so, please identify these categories and, if possible, provide specific estimates or data.

456. Do Commenters believe that the CAT NMS Plan would change the behavior of any market participant in such a way as to create unintended effects? For example, would requirements to report certain data elements or events change the activities of market participants in ways other than deterrence but that create second-order economic effects? If so, please explain. Would such effects be economic benefits or economic costs? Please explain.

V. Paperwork Reduction Act

Certain provisions of Rule 613 contain "collection of information requirements" within the meaning of the Paperwork Reduction Act of 1995 ("PRA")[1369] and the Commission has submitted them to the Office of Management and Budget ("OMB") for review in accordance with 44 U.S.C. 3507 and 5 CFR 1320.11. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The title of the collection of information is "Creation of a Consolidated Audit Trail Pursuant to Section 11A of the Securities Exchange Act of 1934 and Rules Thereunder."

As noted above, Rule 613 of Regulation NMS (17 CFR part 242) requires the Participants to jointly submit to the Commission the CAT NMS Plan to govern the creation, implementation, and maintenance of the consolidated audit trail and Central Repository for the collection of information for NMS securities. The CAT NMS Plan must require each Participant and its respective members to provide certain data to the Central Repository in compliance with Rule 613. When it adopted Rule 613, the Commission discussed the burden hours associated with the development and submission of the CAT NMS Plan.[1370] In doing so, the Commission noted that the development and submission of the CAT NMS Plan that would govern the creation, implementation and maintenance of a consolidated audit trail is a multi-step process and accordingly that the Commission was deferring its discussion of the burden hours associated with the other paperwork requirements required by Rule 613 and ongoing burdens since they would only be incurred if the Commission approves the CAT NMS Plan.[1371]

[1365] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(l).

[1366] *Id.*

[1367] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section D.12(n).

[1368] *See id.*

[1369] 44 U.S.C. 3501 *et. seq.*

[1370] *See* Adopting Release, *supra* note 9, at 45804. On September 25, 2015, the Commission submitted to OMB a request for approval of an extension of the collection of information related to the development and submission of the CAT NMS Plan. The Commission stated that, although that collection of information pertained to the development and submission of an NMS plan, and that such NMS plan had already been developed and submitted, the Commission believed it was prudent to extend the collection of information during the pendency of the Commission's review of the NMS plan. The Commission provided estimates for 19 SROs, stating that they would spend a total of 2,760 burden hours of internal legal, compliance, information technology, and business operations time to comply with the existing collection of information, calculated as follows: (880 programmer analyst hours) + (880 business analyst hours) + (700 attorney hours) + (300 compliance manager hours) = 2,760 burden hours to prepare and file an NMS plan, or approximately 52,440 burden hours in the aggregate, calculated as follows: (2,760 burden hours per SRO) × (19 SROs) = 52,440 burden hours. Amortized over three years, the annualized burden hours would be 920 hours per SRO, or a total of 17,480 for all 19 SROs. The Commission further estimated that the aggregate one-time reporting burden for preparing and filing an NMS plan would be approximately $20,000 in external legal costs per SRO, calculated as follows: 50 legal hours × $400 per hour = $20,000, for an aggregate burden of $380,000, calculated as follows: ($20,000 in external legal costs per SRO) × (19 SROs) = $380,000. Amortized over three years, the annualized capital external cost would be $6,667 per SRO, or a total of $126,667 for the 19 SROs. *See* Submission for OMB Review; Comment Request for Extension of Rule 613; SEC File No. 270–616, OMB Control No. 3235–0671 (September 25, 2015), 80 FR 59209 (October 1, 2015).

The Commission is now publishing its preliminary estimates of the paperwork burdens of the CAT NMS Plan. These estimates are based on the requirements of Rule 613 and take into account the Exemption Order discussed above.[1372] Information and estimates contained in the CAT NMS Plan that was submitted by the Participants also informed these estimates because they provide a useful, quantified point of reference regarding potential burdens and costs. The Commission acknowledges that the CAT NMS Plan as filed contains provisions in addition to those required by Rule 613 (*e.g.*, requiring the inclusion of OTC Equity Securities; [1373] the availability of historical data for not less than six years in a manner that is directly available and searchable without manual intervention from the Plan Processor; [1374] a complete symbology database to be maintained by the Plan Processor, including the historical symbology; as well as issue symbol information and data using the listing exchange symbology format [1375]).

A. Summary of Collection of Information Under Rule 613

Rule 613 requires that the CAT NMS Plan must provide for an accurate, time-sequenced record of an order's life, from receipt or origination, through the process of routing, modification, cancellation and execution.[1376] The Central Repository, created by the Participants, would be required to receive, consolidate and retain the data required under the Rule.[1377] Such data must be accessible to each Participant, as well as the Commission, for purposes of performing regulatory and oversight responsibilities.[1378]

Rule 613 provides that the CAT NMS Plan must require that all Participants that are exchanges, and their members, record and report to the Central Repository certain data for each NMS security registered or listed on a national securities exchange, or admitted to unlisted trading privileges on such exchange, and each Participant that is a national securities association, and its members, record and report for each NMS security for which transaction reports are required to be submitted to the national securities association in a uniform electronic format or in a manner that would allow the Central Repository to convert the data to a uniform electronic format for consolidation and storage. This data must be recorded contemporaneously with the Reportable Event and reported to the Central Repository in no event later than 8:00 a.m. Eastern Time on the trading day following the day such information has been recorded by the national securities exchange, national securities association, or member.[1379]

Rule 613 also provides that the CAT NMS Plan must require each member of a Participant to record and report to the Central Repository other information which may not be available until later in the clearing process no later than 8:00 a.m. Eastern Time on the trading day following the day the member receives such information.[1380] The CAT NMS Plan also requires the Participants to provide to the Commission, at least every two years after the effectiveness of the CAT NMS Plan, a written assessment of the operation of the consolidated audit trail.[1381]

Rule 613 requires all Participants to make use of the consolidated information, either by each developing and implementing new surveillance systems, or by enhancing existing surveillance systems.[1382] The Rule also requires the CAT NMS Plan to require Participants to submit to the Commission a document outlining the manner in which non-NMS securities and primary market transactions in NMS and non-NMS securities can be incorporated into the consolidated audit trail.[1383]

1. Central Repository

Rule 613 provides that the CAT NMS Plan must require the creation and maintenance of a Central Repository that would be responsible for the receipt, consolidation, and retention of all data submitted by the Participants and their members.[1384] The Rule also requires that the CAT NMS Plan require the Central Repository to retain the information reported pursuant to subparagraphs (c)(7) and (e)(7) of the Rule for a period of not less than five years in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention.[1385] The Plan Processor is responsible for operating the Central Repository in compliance with the Rule and the CAT NMS Plan. In addition, the Rule provides that the CAT NMS Plan must include: Policies and procedures to ensure the security and confidentiality of all information submitted to the Central Repository,[1386] including safeguards to ensure the confidentiality of data; [1387] information barriers between regulatory and non-regulatory staff with regard to access and use of data; [1388] a mechanism to confirm the identity of all persons permitted to use the data; [1389] a comprehensive information security program for the Central Repository that is subject to regular reviews by the CCO;[1390] and penalties for non-compliance with policies and procedures of the Participants or the Central Repository with respect to information security.[1391] Further, the Rule provides that the CAT NMS Plan must include policies and procedures to be used by the Plan Processor to ensure the timeliness, accuracy, integrity, and completeness of the data submitted to the Central Repository,[1392] as well as policies and procedures to ensure the accuracy of the consolidation by the Plan Processor of the data.[1393]

2. Data Collection and Reporting

Rule 613 provides that the CAT NMS Plan must require each Participant, and any member of such Participant, to record and electronically report to the

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[1371] *Id.*

[1372] *See* Exemption Order, *supra* note 18.

[1373] *See* CAT NMS Plan, *supra* note 3, at Section 1.1 (defining "Eligible Security" as all NMS securities and all OTC Equity Securities); Appendix C, Section A.1(a).

[1374] *See id.* at Section 6.5(b)(i).

[1375] *See* CAT NMS Plan, *supra* note 3 at Appendix C, Section A.1(a); Appendix D, Section 2.

[1376] *See* 17 CFR 242.613(c)(1).

[1377] *See* 17 CFR 242.613(e)(1).

[1378] *See* 17 CFR 242.613(e)(1), (e)(2).

[1379] *See* 17 CFR 242.613(c)(3).

[1380] *See* 17 CFR 242.613(c)(4).

[1381] *See* 17 CFR 242.613(b).

[1382] *See* 17 CFR 242.613(a)(3)(iv).

[1383] *See* 17 CFR 242.613(i).

[1384] *See* 17 CFR 242.613(e)(1).

[1385] *See* 17 CFR 242.613(e)(8). The Commission notes that the CAT NMS Plan proposes to require that the Central Repository retain data reported in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention for six years. *See* CAT NMS Plan, *supra* note 3, at Section 6.5(b)(i).

[1386] *See* 17 CFR 242.613(e)(4)(i).

[1387] *See* 17 CFR 242.613(e)(4)(i)(A).

[1388] *See* 17 CFR 242.613(e)(4)(i)(B).

[1389] *See* 17 CFR 242.613(e)(4)(i)(C).

[1390] *Id.*

[1391] *See* 17 CFR 242.613(e)(4)(i)(D).

[1392] *See* 17 CFR 242.613(e)(4)(ii).

[1393] *See* 17 CFR 242.613(e)(4)(iii).

Central Repository details for each order and Reportable Event documenting the life of an order through the process of original receipt or origination, routing, modification, cancellation, and execution (in whole or part) for each NMS security.[1394] For national securities exchanges, Rule 613 requires the CAT NMS Plan to require each national securities exchange and its members to record and report to the Central Repository the information required by Rule 613(c)(7) for each NMS security registered or listed for trading on an exchange, or admitted to unlisted trading privileges on such exchange.[1395] Rule 613 provides that the CAT NMS Plan must require each Participant that is a national securities association, and its members, to record and report to the Central Repository the information required by Rule 613(c)(7) for each NMS security for which transaction reports are required to be submitted to the Participant.[1396] The Rule requires each Participant and any member of a Participant to record the information required by Rule 613(c)(7)(i) through (v) contemporaneously with the Reportable Event, and to report this information to the Central Repository by 8:00 a.m. Eastern Time on the trading day following the day such information has been recorded by the Participant or member of the Participant.[1397] The Rule requires each Participant and any member of a Participant to record and report the information required by Rule 613(c)(7)(vi) through (viii) to the Central Repository by 8:00 a.m. Eastern Time on the trading day following the day the Participant or member receives such information.[1398] The Rule requires each Participant and any member of such Participant to report information required by Rule 613(c)(7) in a uniform electronic format or in a manner that would allow the Central Repository to convert the data to a uniform electronic format for consolidation and storage.[1399]

Such information must also be reported to the Central Repository with a time stamp of a granularity that is at least to the millisecond or less to the extent that the order handling and execution systems of a Participant or a member utilize time stamps in finer increments.[1400] The Commission understands that any changes to broker-dealer recording and reporting systems to comply with Rule 613 may also include changes to comply with the millisecond time stamp requirement.

3. Collection and Retention of NBBO, Last Sale Data and Transaction Reports

Rule 613(e)(7) provides that the CAT NMS Plan must require the Central Repository to collect and retain on a current and continuing basis: (i) Information on the NBBO for each NMS Security; (ii) transaction reports reported pursuant to a transaction reporting plan filed with the Commission pursuant to, and meeting the requirements of, Rule 601 of Regulation NMS; and (iii) Last Sale Reports reported pursuant to the OPRA Plan.[1401] The Central Repository must retain this information for no less than five years.[1402]

4. Surveillance

Rule 613(f) provides that the CAT NMS Plan must require that every Participant develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the consolidated audit trail. Rule 613(a)(3)(iv) provides that the CAT NMS Plan must require that the surveillance systems be implemented within fourteen months after effectiveness of the CAT NMS Plan.

5. Participant Rule Filings

Rule 613(g)(1) requires each Participant to file with the Commission, pursuant to Section 19(b)(2) of the Exchange Act and Rule 19b–4 thereunder,[1403] a proposed rule change to require its members to comply with the requirements of Rule 613 and the CAT NMS Plan approved by the Commission.[1404] The burden of filing such a proposed rule change is already included under the collection of information requirements contained in Rule 19b–4 under the Exchange Act.[1405]

6. Written Assessment of Operation of the Consolidated Audit Trail

Rule 613(b)(6) provides that the CAT NMS Plan must require the Participants to provide the Commission a written assessment of the consolidated audit trail's operation at least every two years, once the CAT NMS Plan is effective.[1406] Such written assessment shall include, at a minimum, with respect to the CAT: (i) An evaluation of its performance; (ii) a detailed plan for any potential improvements to its performance; (iii) an estimate of the costs associated with any such potential improvements; and (iv) an estimated implementation timeline for any such potential improvements, if applicable.[1407]

7. Document on Expansion to Other Securities

Rule 613(i) provides that the CAT NMS Plan must require the Participants to jointly provide to the Commission, within six months after the CAT NMS Plan is effective, a document outlining how the Participants could incorporate into the CAT information regarding: (1) Equity securities that are not NMS securities; [1408] (2) debt securities; and market transactions in equity securities that are not NMS securities and debt securities.[1409]

B. Proposed Use of Information

1. Central Repository

Rule 613 states that the Central Repository is required to receive, consolidate and retain the data required to be submitted by the Participants and their members.[1410] Participant and Commission Staff would have access to the data for regulatory purposes.[1411]

2. Data Collection and Reporting

The Commission believes that the data collected and reported pursuant to the requirements of Rule 613 would be used by regulators to monitor and surveil the securities markets and detect and investigate activity, whether on one market or across markets.[1412] The data collected and reported pursuant to Rule 613 would also be used by regulators for the evaluation of tips and complaints and for complex enforcement inquiries or investigations, as well as inspections and examinations. Further, the Commission believes that regulators would use the data collected and reported to conduct timely and accurate analysis of market activity for reconstruction of broad-based market events in support of regulatory decisions.

[1394] *See* 17 CFR 242.613(c)(1), (c)(5), (c)(6), (c)(7).

[1395] *See* 17 CFR 242.613(c)(1), (c)(5).

[1396] *See* 17 CFR 242.613(c)(1), (c)(6).

[1397] *See* 17 CFR 242.613(c)(3).

[1398] *See* 17 CFR 242.613(c)(4).

[1399] *See* 17 CFR 242.613(c)(2).

[1400] *See* 17 CFR 242.613(d)(3).

[1401] *See* 17 CFR 242.613(e)(7); 17 CFR 242.601.

[1402] *See* 17 CFR 242.613(e)(8).

[1403] 15 U.S.C. 78s(b)(2) and 17 CFR 240.19b–4.

[1404] *See* 17 CFR 242.613(g)(1).

[1405] *See* Securities Exchange Act Release No. 50486 (October 5, 2004), 69 FR 60287, 60293 (October 8, 2004) (File No. S7–18–04) (describing the collection of information requirements contained in Rule 19b–4 under the Exchange Act). The Commission has submitted revisions to the current collection of information titled "Rule 19b–4 Filings with Respect to Proposed Rule Changes by Self-Regulatory Organizations" (OMB Control No. 3235–0045). According to the last submitted revision, for Fiscal Year 2012 SROs submitted 1,688 Rule 19b–4 proposed rule changes.

[1406] *See* 17 CFR 242.613(b)(6).

[1407] *See id.*

[1408] As noted above, the CAT NMS Plan would require the inclusion of OTC Equity Securities, while Rule 613 does not include such a requirement. *See supra* note 1373.

[1409] *See* 17 CFR 242.613(i).

[1410] *See* 17 CFR 242.613(e)(1).

[1411] *See* 17 CFR 242.613(e)(2).

[1412] *See* Section IV.E.2, *supra*.

3. Collection and Retention of NBBO, Last Sale Data and Transaction Reports

The CAT NMS Plan must require the Central Repository to collect and retain NBBO information, transaction reports, and Last Sale Reports in a format compatible with the order and event information collected pursuant to Rule 613(c)(7).[1413] Participant and Commission Staff could use this data to easily search across order, NBBO, and transaction databases. The Commission believes that having the NBBO information in a uniform electronic format compatible with order and event information would assist Participants in enforcing compliance with federal securities laws, rules, and regulations, as well as their own rules.[1414] The Commission also believes that a CAT NMS Plan requiring the Central Repository to collect and retain the transaction reports and Last Sale Reports in a format compatible with the order execution information would aid regulators in monitoring for certain market manipulations.[1415]

4. Surveillance

The requirement in Rule 613(f) that the Participants develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information in the consolidated audit trail,[1416] is intended to position regulators to make full use of the consolidated audit trail data in order to carry out their regulatory obligations. In addition, because trading and potentially manipulative activities could take place across multiple markets, and the consolidated audit trail data would trace the entire lifecycle of an order from origination to execution or cancellation, new or enhanced surveillance systems may also enable regulators to investigate potentially illegal activity that spans multiple markets more efficiently.

5. Written Assessment of Operation of the Consolidated Audit Trail

Rule 613(b)(6) requires the CAT NMS Plan to require the Participants to provide the Commission a written assessment of the CAT's operation at least every two years, once the CAT NMS Plan is effective.[1417] These assessments would aid Participant and Commission Staff in understanding and evaluating any deficiencies in the operation of the consolidated audit trail and to propose potential improvements to the CAT NMS Plan. The Commission believes the written assessments would allow Participants and Commission Staff to periodically assess whether such potential improvements would enhance market oversight. Moreover, the Commission believes these assessments would help inform the Commission regarding the likely feasibility, costs, and impact of, and the Participants' approach to, the consolidated audit trail evolving over time.

6. Document on Expansion to Other Securities

Rule 613(i) requires the CAT NMS Plan to require the Participants to jointly provide to the Commission, within six months after the CAT NMS Plan is effective, a document outlining how the SROs could incorporate into the CAT information regarding certain products that are not NMS securities.[1418] A document outlining a possible expansion of the consolidated audit trail could help inform the Commission about the SROs' strategy for potentially accomplishing such an expansion over a reasonable period of time. Moreover, such document would aid the Commission in assessing the feasibility and impact of possible future proposals by the SROs to include such additional securities and transactions in the consolidated audit trail.

C. Respondents

1. National Securities Exchanges and National Securities Associations

Rule 613 applies to the 20 Participants (the 19 national securities exchanges and the one national securities association (FINRA)) currently registered with the Commission.[1419]

2. Members of National Securities Exchanges and National Securities Association

Rule 613 also applies to the Participants' members, that is, broker-dealers. The Commission believes that Rule 613 applies to 1,800 broker-dealers. The Commission understands that there are currently 4,138 broker-dealers; however, not all broker-dealers are expected to have CAT reporting obligations. The Participants report that approximately 1,800 broker-dealers currently quote or execute transactions in NMS Securities, Listed Options or OTC Equity Securities and would likely have CAT reporting obligations.[1420]

D. Total Initial and Annual Reporting and Recordkeeping Burden

1. Burden on National Securities Exchanges and National Securities Associations

a. Central Repository

Rule 613 requires the Participants to jointly establish a Central Repository tasked with the receipt, consolidation, and retention of the reported order and execution information. The Participants issued an RFP soliciting Bids from entities to act as the consolidated audit trail's Plan Processor.[1421] Bidders were asked to provide total one-year and annual recurring cost estimates to estimate the costs to the Participants for implementing and maintaining the

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[1413] *See* 17 CFR 242.613(e)(7).

[1414] The Commission and Participants use the NBBO to, among other things, evaluate members for compliance with numerous regulatory requirements, such as the duty of best execution or Rule 611 of Regulation NMS. *See* 17 CFR 242.611; *see also, e.g.*, ISE Rule 1901 and Phlx Rule 1084.

[1415] Rules 613(e)(7)(ii) and (iii) require that transaction reports reported pursuant to an effective transaction reporting plan and Last Sale Reports reported pursuant to the OPRA Plan be reported to the Central Repository. This requirement should allow regulators to evaluate certain trading activity. For example, trading patterns of reported and unreported trades may cause Participant or Commission staff to make further inquiries into the nature of the trading to ensure that the public was receiving accurate and timely information regarding executions and that market participants were continuing to comply with trade reporting obligations under Participant rules. Similarly, patterns in the transactions that are reported and unreported to the consolidated tape could be indicia of market abuse, including failure to obtain best execution for customer orders or possible market manipulation. The Commission and the Participants would be able to review information on trades not reported to the tape to determine whether they should have been reported, whether Section 31 fees should have been paid, and/or whether the trades are part of a manipulative scheme.

[1416] 17 CFR 242.613(f).

[1417] 17 CFR 242.613(b)(6).

[1418] *See* 17 CFR 242.613(i). *See also supra* note 1408.

[1419] The Participants are: BATS Exchange, Inc., BATS–Y Exchange, Inc., BOX Options Exchange LLC, C2 Options Exchange, Incorporated, Chicago Board Options Exchange, Incorporated, Chicago Stock Exchange, Inc., EDGA Exchange, Inc., EDGX Exchange, Inc., Financial Industry Regulatory Authority, Inc., International Securities Exchange, LLC, ISE Gemini, LLC, ISE Mercury, LLC, Miami International Securities Exchange LLC, NASDAQ OMX BX, Inc., NASDAQ OMX PHLX LLC, The NASDAQ Stock Market LLC, National Stock Exchange, Inc., New York Stock Exchange LLC, NYSE MKT LLC, and NYSE Arca, Inc. The Commission understands that ISE Mercury, LLC will become a Participant in the CAT NMS Plan and thus is accounted for as a Participant for purposes of this Section. *See supra* note 3.

[1420] The Commission understands that the remaining 2,338 registered broker-dealers either trade in asset classes not currently included in the definition of Eligible Security or do not trade at all (*e.g.*, broker-dealers for the purposes of underwriting, advising, private placements). *See supra* note 864.

[1421] *See* Section III.A.1, *supra*.

Central Repository.[1422] There are currently three remaining Bidders, any of which could be selected to be the Plan Processor. The Plan Processor would be responsible for building, operating, administering and maintaining the Central Repository.

The Plan's Operating Committee, which consists of one voting representative of each Participant,[1423] would be responsible for the management of the LLC, including the Central Repository, acting by Majority or Supermajority Vote, depending on the issue.[1424] In managing the Central Repository, among other things, the Operating Committee would have the responsibility to authorize the following actions of the LLC: (1) Interpreting the Plan; [1425] (2) determining appropriate funding-related policies, procedures and practices consistent with Article XI of the CAT NMS Plan; [1426] (3) terminating the Plan Processor; (4) selecting a successor Plan Processor (including establishing a Plan Processor Selection Subcommittee to evaluate and review Bids and make a recommendation to the Operating Committee with respect to the selection of the successor Plan Processor); [1427] (5) entering into, modifying or terminating any Material Contract; [1428] (6) making any Material Systems Change; [1429] (7) approving the initial Technical Specifications or any Material Amendment to the Technical Specifications proposed by the Plan Processor; [1430] (8) amending the Technical Specifications on its own motion; [1431] (9) approving the Plan Processor's appointment or removal of the CCO, CISO, or any Independent Auditor in accordance with Section 6.1(b) of the CAT NMS Plan; [1432] (10) approving any recommendation by the CCO pursuant to Section 6.2(a)(v)(A); [1433] (11) selecting the members of the Advisory Committee; [1434] (12) selecting the Operating Committee chair; [1435] and (13) determining to hold an Executive Session of the Operating Committee.[1436]

Additionally, in managing the Central Repository, the Operating Committee would have the responsibility and authority, as appropriate, to: (1) Direct the LLC to enter into one or more agreements with the Plan Processor obligating the Plan Processor to perform the functions and duties contemplated by the Plan to be performed by the Plan Processor, as well as such other functions and duties the Operating Committee deems necessary or appropriate; [1437] (2) appoint as an Officer of the Company the individual who has direct management responsibility for the Plan Processor's performance of its obligations with respect to the CAT; [1438] (3) approve policies, procedures, and control structures related to the CAT System that are consistent with Rule 613(e)(4), Appendix C and Appendix D of the CAT NMS Plan that have been developed and will be implemented by the Plan Processor; [1439] (4) approve any policy, procedure or standard (and any material modification or amendment thereto) applicable primarily to the performance of the Plan Processor's duties as the Plan Processor; [1440] (5) for both the CCO and CISO, render their annual performance reviews and review and approve their compensation; [1441] (6) review the Plan Processor's performance under the Plan at least once each year, or more often than once each year upon the request of two Participants that are not Affiliated Participants; [1442] (7) in conjunction with the Plan Processor, approve and regularly review (and update as necessary) SLAs governing the performance of the Central Repository; [1443] (8) maintain a Compliance Subcommittee for the purpose of aiding the CCO as necessary; [1444] and (9) designate by resolution one or more Subcommittees it deems necessary or desirable in furtherance of the management of the business and affairs of the Company.[1445]

The CAT NMS Plan also proposes to establish a Selection Committee comprised of one Voting Senior Officer from each Participant,[1446] which is tasked with the review and evaluation of Bids and the selection of the initial Plan Processor.[1447] The Selection Committee would determine, by Majority Vote, whether Shortlisted Bidders will have the opportunity to revise their Bids.[1448] The Selection Committee would review and evaluate all Shortlisted Bids, including any permitted revisions submitted by Shortlisted Bidders, and in doing so, may consult with the Advisory Committee (or the DAG until the Advisory Committee is formed) and such other Persons as the Selection Committee deems appropriate.[1449] After receipt of any permitted revisions, the Selection Committee would select the Initial Plan Processor from the Shortlisted Bids in two rounds of voting where each Participant has one vote via its Voting Senior Officer in each round.[1450] Following the selection of the Initial Plan Processor, the Participants would file with the Commission a statement identifying the Initial Plan Processor and including the information required by Rule 608.[1451]

For its initial and ongoing internal burden and cost estimates associated with the management of the Central Repository, the Commission is relying on estimates provided in the CAT NMS Plan for the development of the CAT NMS Plan, which the Participants "have accrued, and will continue to accrue," [1452] and have described in the CAT NMS Plan as "reasonably associated with creating, implementing, and maintaining the CAT upon the Commission's adoption of the CAT NMS Plan." [1453]

The Commission believes that the activities of the Operating Committee and the Selection Committee overlap with those undertaken by the Participants to develop the CAT NMS Plan. The CAT NMS Plan describes the costs incurred by the Participants to develop the CAT NMS Plan as including "staff time contributed by each Participant to, among other things, determine the technological requirements for the Central Repository, develop the RFP, evaluate Bids received, design and collect the data necessary to evaluate costs and other economic impacts, meet with Industry

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[1422] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B). The CAT NMS Plan listed the following as primary drivers of Bid costs: (1) Reportable volumes of data ingested into the Central Repository; (2) number of technical environments that would be have to be built to report to the Central Repository; (3) likely future rate of increase of reportable volumes; (4) data archival requirements; and (5) user support and/or help desk resource requirements. *See id.* at Section B.7(b)(i)(B).

[1423] *See id.* at Section 4.2(a).

[1424] *See* Section IV.E.3.d(1), *supra*.

[1425] *See* CAT NMS Plan, *supra* note 3, at Section 4.3(a)(iii).

[1426] *See id.* at Section 4.3(a)(vi).

[1427] *See id.* at Section 4.3(b)(i).

[1428] *See id.* at Section 4.3(b)(iv).

[1429] *See id.* at Section 4.3(b)(v).

[1430] *See id.* at Section 4.3(b)(vi).

[1431] *See id.* at Section 4.3(b)(vii).

[1432] *See id.* at Section 4.3(b)(iii).

[1433] *See id.* at Section 4.3(a)(iv).

[1434] *See id.* at Section 4.3(a)(ii).

[1435] *See id.* at Section 4.3(a)(i).

[1436] *See id.* at Section 4.3(a)(v).

[1437] *See id.* at Section 6.1(a).

[1438] *See id.* at Section 4.6(b).

[1439] *See id.* at Section 6.1(c).

[1440] *See id.* at Section 6.1(e).

[1441] *See id.* at Section 6.2(a)(iv) and Section 6.2(b)(iv).

[1442] *See id.* at Section 6.1(n).

[1443] *See id.* at Section 6.1(h).

[1444] *See id.* at Section 4.12(b).

[1445] *See id.* at Section 4.12(a).

[1446] *See id.* at Section 5.1(a).

[1447] *See id.* at Section 5.1.

[1448] *See id.* at Section 5.1(d)(i).

[1449] *See id.* at Section 5.1(d)(ii).

[1450] *See id.* at Section 5.1(e).

[1451] *See id.* at Section 6.7(a)(i).

[1452] *See id.* at Appendix C, Section B.7(b)(iii).

[1453] *See id.*

Members to solicit feedback, and complete the CAT NMS Plan submitted to the Commission for consideration."[1454] For the building and management of the Central Repository, the Selection Committee and the Operating Committee would have comparable responsibilities. The Selection Committee would be required to review and evaluate all Shortlisted Bids, including any permitted revisions submitted by Shortlisted Bidders, and then to select the initial Plan Processor from those Bids. As part of its overall management of the Central Repository, the Operating Committee would have responsibility for decisions associated with the technical requirements of the Central Repository.[1455] Furthermore, the Operating Committee would be required to establish a Selection Subcommittee to evaluate Bids received to select a successor Plan Processor,[1456] and would also be required to authorize the selection of the members of the Advisory Committee,[1457] comprising members of the Industry, to advise the Participants on the implementation, operation, and administration of the Central Repository.[1458] Because the responsibilities of the Operating Committee and the Selection Committee are similar to those described in the CAT NMS Plan for the development of the CAT NMS Plan itself, the Commission believes that it is reasonable to use the CAT NMS Plan estimates as the basis for its burden and cost estimates for the initial and ongoing management of the Central Repository.

(1) Initial Burden and Costs To Build the Central Repository

As proposed, each Participant would contribute an employee and a substitute for the employee to serve on the Operating Committee that would oversee the Central Repository.[1459] Additionally, each Participant would select a Voting Senior Officer to represent the Participant as a member of the Selection Committee responsible for the selection of the Plan Processor of the Central Repository.[1460]

The Commission preliminarily estimates that, over the 12-month period after the effectiveness of the CAT NMS Plan within which the Participants would be required to select an initial Plan Processor[1461] and begin reporting to the Central Repository,[1462] each Participant would incur an initial internal burden of 720 burden hours associated with the management of the creation of the Central Repository and the selection of the Plan Processor (including filing with the Commission the statement identifying the Initial Plan Processor and including the information required by Rule 608), for an aggregate initial estimate of 14,407 burden hours.[1463]

Additionally, the Commission preliminarily estimates that the Participants will collectively spend $2,400,000 on external public relations, legal and consulting costs associated with the building of the Central Repository and the selection of the Plan Processor for the Central Repository, or $120,000 per Participant.[1464] The Commission is basing this estimate on the estimate provided in the CAT NMS Plan for public relations, legal and consulting costs incurred in preparation of the CAT NMS Plan. Because the Participants described such costs as "reasonably associated with creating, implementing and maintaining the CAT,"[1465] the Commission preliminarily believes these external cost estimates should also be applied to the creation and implementation of the Central Repository.

The CAT NMS Plan provides the estimates given by the Shortlisted Bidders[1466] for the one-time total cost associated with the Plan Processor that would build the Central Repository.[1467]

[1454] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii).

[1455] For example, the Operating Committee would be required to authorize the following actions of the LLC: Entering into, modifying or terminating any Material Contract (*see id.* at Section 4.3(b)(iv)); making any Material Systems Change (*see id.* at Section 4.3(b)(v)); amending the Technical Specifications on its own motion (*see id.* at Section 4.3(b)(vii)); and approving the initial Technical Specifications or any Material Amendment to the Technical Specifications proposed by the Plan Processor (*see id.* at Section 4.3(b)(vi)). Further, the Operating Committee would be able to approve policies, procedures, and control structures related to the CAT System that are consistent with Rule 613(e)(4), Appendix C and Appendix D of the CAT NMS Plan that have been developed and will be implemented by the Plan Processor (*see id.* at Section 6.1(c)); and in conjunction with the Plan Processor, approve and regularly review (and update as necessary) SLAs governing the performance of the Central Repository (*see id.* at Section 6.1(h)).

[1456] *See id.* at Section 4.3(b)(i).

[1457] *See id.* at Section 4.3(a)(ii).

[1458] *See id.* at Section 4.13(d).

[1459] In the case of Affiliated Participants, one individual may be the primary representative for all or some of the Affiliated Participants, and another individual may be the substitute for all or some of the Affiliated Participants. *See id.* at Section 4.2(a).

[1460] In the case of Affiliated Participants, one individual may be (but is not required to be) the Voting Senior Officer for more than one or all of the Affiliated Participants. Where one individual serves as the Voting Senior Officer for more than one Affiliated Participant, such individual will have the right to vote on behalf of each such Affiliated Participant. *See id.* at Section 5.1(a).

[1461] Rule 613(a)(3)(i) requires the selection of the Plan Processor within 2 months after effectiveness of the CAT NMS Plan. *See* 17 CFR 242.613(a)(3)(i).

[1462] Rule 613(a)(3)(iii) requires the Participants to provide to the Central Repository the data required by Rule 613(c) within one year after effectiveness of the CAT NMS Plan. *See* 17 CFR 242.613(a)(3)(iii).

[1463] The Commission is basing this estimate on the internal burden estimate provided in the CAT NMS Plan related to the development of the CAT NMS Plan. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii) (stating ". . . the Participants have accrued, and will continue to accrue, direct costs associated with the development of the CAT NMS Plan. These costs include staff time contributed by each Participant to, among other things, determine the technological requirements for the Central Repository, develop the RFP, evaluate Bids received, design and collect the data necessary to evaluate costs and other economic impacts, meet with Industry Members to solicit feedback, and complete the CAT NMS Plan submitted to the Commission for consideration. The Participants estimate that they have collectively contributed 20 FTEs in the first 30 months of the CAT NMS Plan development process"). The Commission believes the staff time incurred for the development of the CAT NMS Plan would be comparable to the staff time incurred for the activities required of the Operating Committee and the Selection Committee for the creation and management of the Central Repository once the Plan is effective). (20 FTEs/30 months) = 0.667 FTEs per month for all of the Participants to develop the CAT NMS Plan. Converting this into burden hours, (0.667 FTEs) × (12 months) × (1,800 burden hours per year) =14,407 initial burden hours for all of the Participants to develop the CAT NMS Plan. (14,407 burden hours for all Participants/20 Participants) = 720 initial burden hours for each Participant to develop the CAT NMS Plan.

[1464] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii) (stating "the Participants have incurred public relations, legal and consulting costs in preparation of the CAT NMS Plan. The Participants estimate the costs of these services to be $8,800,000"). $2,400,000 for all Participants over 12 months = ($8,800,000/44 months between the adoption of Rule 613 and the filing of the CAT NMS Plan) × (12 months). ($2,400,000/20 Participants) = $120,000 per Participant over 12 months.

[1465] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii).

[1466] The Selection Committee narrowed the list of Shortlisted Bidders from six to three Shortlisted Bidders. *See* "Participants, SROs Reduce Short List Bids from Six to Three for Consolidated Audit Trail" (November 16, 2015), *available at http://www.catnmsplan.com/pastevents/catnms_release_downselect_111615.pdf*. However, the costs provided by the SROs in the CAT NMS Plan are based on the Bids of the six Shortlisted Bidders.

[1467] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B). *See also id.* at Appendix C, Section B.7(b)(iv)(A)(1). The Commission notes that the cost associated with the build and maintenance of the Central Repository includes compliance with the requirement in Rule 613(e)(8) that the Central Repository retain information collected pursuant to Rule 613(c)(7) and (e)(7) in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention for a period of not less than five years. *See id.* at Section 6.1(d)(i) (requiring the Plan Processor to comply with the recordkeeping requirements of Rule 613(e)(8)). *See also id.* at Appendix C, Section D.12(l) (stating that Rule 613(e)(8) requires data to be available and searchable for a period of not less than five years, that broker-dealers are currently required to retain data for six years under Rule 17a–4(a), and that the Participants are requiring CAT Data to be kept online in an easily accessible format for regulators for six years, though this may increase the cost to run the CAT). The Commission notes that a

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The CAT NMS Plan states that this includes internal technological, operational, administrative and "any other material costs."[1468] Using the estimates in the CAT NMS Plan, which are based on the Bids of the six Shortlisted Bidders, the Commission preliminarily estimates that the initial one-time cost to develop the Central Repository would be an aggregate initial external cost to the Participants of $91.6 million,[1469] or $4.6 million per Participant.[1470] Therefore, the Commission preliminarily estimates that each Participant would incur initial one-time external costs of $7 million[1471] to build the Central Repository, or an aggregate initial one-time external cost across all Participants of $140 million.[1472]

(2) Ongoing, Annual Burden Hours and Costs for the Central Repository

After the Central Repository has been developed and implemented, there would be ongoing costs for operating and maintaining the Central Repository, including the cost of systems and connectivity upgrades or changes necessary to receive, consolidate, and store the reported order and execution information from Participants and their members; the costs to store data, and make it available to regulators, in a uniform electronic format, and in a form in which all events pertaining to the same originating order are linked together in a manner that ensures timely and accurate retrieval of the information;[1473] the cost, including storage costs, of collecting and maintaining the NBBO and transaction data in a format compatible with the order and event information collected pursuant to the Rule; the cost of monitoring the required validation parameters, which would allow the Central Repository to automatically check the accuracy and completeness of the data submitted and reject data not conforming to these parameters consistent with the requirements of the proposed Rule; and the cost of paying the CCO. The CAT NMS Plan provides that the Plan Processor would be responsible for the ongoing operations of the Central Repository.[1474] The Operating Committee would continue to be responsible for the management of the Central Repository. In addition, the CAT NMS Plan states that the Participants would incur costs for public relations, legal, and consulting costs associated with maintaining the CAT upon approval of the CAT NMS Plan.[1475]

The Commission preliminarily estimates that the Participants would incur an ongoing annual internal burden of 720 burden hours associated with the continued management of the Central Repository, for an aggregate annual estimate of 14,407 burden hours across the Participants.[1476]

Additionally, the Commission estimates that the Participants will collectively spend $800,000 annually on external public relations, legal and consulting costs associated with the continued management of the Central Repository, or $40,000 per Participant.[1477]

The CAT NMS Plan includes the estimates the six Shortlisted Bidders provided for the annual ongoing costs to the Participants to operate the Central Repository.[1478] The CAT NMS Plan did not categorize the costs included in the ongoing costs, but the Commission believes they would comprise external technological, operational and administrative costs, as the Participants described the costs included in the initial one-time external cost to build the Central Repository.[1479] Using these estimates, the Commission preliminarily estimates that the annual ongoing cost to the Participants[1480] to compensate the Plan Processor for building, operating and maintaining the Central Repository would be an aggregate ongoing external cost of $93 million,[1481] or approximately $4.7 million per

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Shortlisted Bidder may be permitted to revise its Bid prior to approval of the CAT NMS Plan if the CAT Selection Committee determines by Majority Vote that such revisions are necessary or appropriate, so the estimates provided in the CAT NMS Plan may be subject to change. *See id.* at Section 5.2(c)(ii). In addition, changes in technology between the time the Bids were submitted and the time the Central Repository is built could result in changes to the costs to build and operate the Central Repository.

[1468] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B).

[1469] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B) (describing the minimum, median, mean and maximum Bidder estimates for the build and maintenance costs of the Central Repository).

[1470] *Id.* The Bidders provided a range of estimates. For purposes of this Paperwork Burden Act analysis, the Commission is using the build cost of the maximum Bidder estimate. $4,580,000 = $91,600,000/20 SROs.

[1471] $7 million for each Participant to build the Central Repository = ($4.6 million per Participant in initial one-time costs to compensate the Plan Processor to build the Central Repository) + ($2.4 million per Participant in initial one-time public relations, legal and consulting costs associated with the building of the Central Repository and the selection of the initial Plan Processor).

[1472] $140 million for all of the Participants to build the Central Repository = $7 million per Participant to build the Central Repository) × (20 Participants). *Id.*

[1473] *See supra* note 1469.

[1474] *See* CAT NMS Plan, *supra* note 3, at Section 6.1.

[1475] *See id.* at Appendix C, Section B.7(b)(iii).

[1476] The Commission is basing this estimate on the internal burden estimate provided in the CAT NMS Plan for the development of the CAT NMS Plan. The Commission notes that the CAT NMS Plan describes the internal burden estimate for the development of the CAT NMS Plan as a cost the Participants will continue to accrue; therefore, the Commission preliminarily believes that it is reasonable to use this burden estimate as the basis for its ongoing internal burden estimate for the maintenance of the Central Repository, particularly as the Commission believes the reasons for the staff time incurred for the development of the CAT NMS Plan would be comparable to those of the staff time to be incurred by the Operating Committee and the Selection Committee for the continued management of the Central Repository. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii) (stating ". . . the Participants have accrued, and will continue to accrue, direct costs associated with the development of the CAT NMS Plan. These costs include staff time contributed by each Participant to, among other things, determine the technological requirements for the Central Repository, develop the RFP, evaluate Bids received, design and collect the data necessary to evaluate costs and other economic impacts, meet with Industry Members to solicit feedback, and complete the CAT NMS Plan submitted to the Commission for consideration. The Participants estimate that they have collectively contributed 20 FTEs in the first 30 months of the CAT NMS Plan development process"). (20 FTEs/30 Participants) = 0.667 FTEs per month for all of the Participants to continue management of the Central Repository. Converting this into burden hours, (0.667 FTEs) × (12 months) × (1,800 burden hours per year) = 14,407 ongoing annual burden hours for all of the Participants to continue management of the Central Repository. (14,407 ongoing annual burden hours for all Participants/20 Participants) = 720 ongoing annual burden hours for each Participant to continue management of the Central Repository.

[1477] The Commission is basing this external cost estimate on the public relations, legal and consulting external cost estimate provided in the CAT NMS Plan associated with the preparation of the CAT NMS Plan (which the Participants consider "reasonably associated with creating, implementing, and maintaining the CAT upon the Commission's adoption of the CAT NMS Plan"). *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii) (stating "the Participants have incurred public relations, legal and consulting costs in preparation of the CAT NMS Plan. The Participants estimate the costs of these services to be $8,800,000"). $2,400,000 for all Participants over 12 months = ($8,800,000/44 months between the adoption of Rule 613 and the filing of the CAT NMS Plan) × (12 months). Because the Central Repository will have already been created, the Commission believes it is reasonable to assume that the Participants will have a lesser need for public relations, legal and consulting services. The Commission is estimating that the Participants will incur one-third of the external cost associated with development and implementation of the Central Repository to maintain the Central Repository. $800,000 = (0.333) × ($2,400,000). ($800,000/20 Participants) = $40,000 per Participant over 12 months.

[1478] *See* Section IV.F.1.a, *supra,* for a discussion of the total five-year operating costs for the Central Repository presented in the CAT NMS Plan. *See also* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B); *supra* note 840; *supra* note 1467.

[1479] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B).

[1480] *See supra* note 1469.

[1481] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(B).

Participant.[1482] Therefore, the Commission preliminarily estimates that each Participant would incur ongoing annual external costs of $4,740,000[1483] to maintain the Central Repository, or aggregate ongoing annual external costs across all Participants of $94,800,000.[1484]

b. Data Collection and Reporting

Rule 613(c)(1) requires the CAT NMS Plan to provide for an accurate, time-sequenced record of orders beginning with the receipt or origination of an order by a Participant, and further to document the life of the order through the process of routing, modification, cancellation and execution (in whole or in part) of the order. Rule 613(c) requires the CAT NMS Plan to impose requirements on Participants to record and report CAT information to the Central Repository in accordance with specified timelines.

Rule 613(c) would require the collection and reporting of some information that Participants already collect to operate their business and are required to maintain in compliance with Section 17(a) of the Exchange Act and Rule 17a–1 thereunder.[1485] For instance, the Commission believes that the national securities exchanges keep records pursuant to Section 17(a) of the Exchange Act and Rule 17a–1 thereunder in electronic form, of the receipt of all orders entered into their systems, as well as records of the routing, modification, cancellation, and execution of those orders. However, Rule 613 requires the Participants to collect and report additional and more detailed information, and to report the information to the Central Repository in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format for consolidation and storage.

The CAT NMS Plan provides estimated costs for the Participants to report CAT Data. These estimates are based on Participant responses to the Participants Study that the Participants collected to estimate CAT-related costs for hardware and software, FTE costs, and third-party providers, if the Commission approves the CAT NMS Plan.[1486] For these estimates, the Commission is relying on the cost data provided by the Participants because it believes that the Plan's estimates for Participants to report CAT Data are reliable since all of the Participants provided cost estimates, and most Participants have experience collecting audit trail data, as well as knowledge of both the requirements of Rule 613 as well as their current business practices. The Commission is providing below its paperwork burden estimates for the initial burden hours and external costs, and ongoing, annual burden hours and external costs to be incurred by the Participants to comply with the data reporting requirements of Rule 613.

The Commission notes that throughout this Paperwork Reduction Act analysis, it is categorizing the FTE cost estimates for the Participants, as well as the broker-dealer respondents, that were provided in the CAT NMS Plan as an internal burden. To convert the FTE cost estimates into internal burden hours, the Commission: (1) Divided the FTE cost estimates by a divisor of $424,350, which is the Commission's estimated average salary for a full-time equivalent employee in the securities industry in a job category associated with regulatory data reporting;[1487] and then (2) multiplied the quotient by 1,800 (the number of hours a full-time equivalent employee is estimated to work per year).

(1) Initial Burden Hours and External Cost

The CAT NMS Plan provides the following average costs that the Participants would expect to incur to adopt the systems changes needed to comply with the data reporting requirements of the consolidated audit trail: $10,300,000 in aggregate FTE costs for internal operational, technical/development, and compliance functions; $770,000 in aggregate third party legal and consulting costs; and $17,900,000 in aggregate total costs.[1488]

Based on estimates provided in the CAT NMS Plan, the Commission preliminarily estimates that the initial internal burden hours to develop and implement the needed systems changes to capture the required information and transmit it to the Central Repository in compliance with the Rule for each Participant would be approximately 2,185 burden hours.[1489] The Commission also estimates that each Participant would, on average, incur approximately $38,500 in initial third party legal and consulting costs[1490] for a total of $380,000 in initial external costs.[1491] Therefore, the Commission preliminarily estimates that, for all Participants, the estimated aggregate one-time burden would be 43,690 hours[1492] and the estimated aggregate initial external cost would be $7,600,000.[1493]

[1482] The Bidders provided a range of estimates. For purposes of this Paperwork Burden Act analysis, the Commission is using the maximum operation and maintenance cost estimate. $4,650,000 = $93,000,000/20 Participants. *See also* Section IV.F.1.a, *supra*. The Commission noted several uncertainties that may affect the Central Repository cost estimates, including (1) that the Participants have not yet selected a Plan Processor and the Shortlisted Bidders have submitted a wide range of cost estimates for building and operating the Central Repository; (2) the Bids submitted by the Shortlisted Bidders may not be final because they may be revised before the final selection of the CAT Processor; and (3) neither the Bidders nor the Commission can anticipate the evolution of technology and market activity with precision, as improvements in available technology may allow the Central Repository to be built and operated at a lower cost than is currently anticipated, but if levels of anticipated market activity are materially underestimated, the capacity of the Central Repository may need to be increased, resulting in an increase in costs.

[1483] $4,740,000 for each Participant to build the Central Repository = ($4.7 million per Participant in ongoing annual costs to build the Central Repository) + ($40,000 per Participant in ongoing annual public relations, legal and consulting costs associated with the maintenance of the Central Repository).

[1484] $94,800,000 for all of the Participants to maintain the Central Repository = ($4,740,000 per Participant to compensate the Plan Processor and for external public relations, legal and consulting costs associated with the maintenance of the Central Repository) × (20 Participants). *Id.*

[1485] 15 U.S.C. 78q(a); 17 CFR 240.17a–1.

[1486] Third-party provider costs are generally legal and consulting costs, but may include other outsourcing. The template used by respondents is *available at http://catnmsplan.com/PastEvents/* under the Section titled "6/23/14" at the "Cost Study Working Template" link.

[1487] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(C) at n.192. The Participants represented that the cost per FTE is $401,440. The $401,440 figure used in the CAT NMS plan was based on a Programmer Analyst's salary ($193 per hour) from SIFMA's *Management & Professional Earnings in the Securities Industry 2008*, multiplied by 40 hours per week, then multiplied by 52 weeks per year. The Commission has updated this number to include recent salary data for other job categories associated with regulatory data reporting in the securities industry, using the hour and multiple methodology used by the Commission in its paperwork burden analyses. The Commission is using $424,350 as its annual cost per FTE for purposes of its cost estimates. The $424,350 FTE cost = 25% Compliance Manager + 75% Programmer Analyst (0.25) × ($283 per hour × 1,800 working hours per year) + (0.75) × ($220 per hour × 1,800 working hours per year). The $282 per hour figure for a Compliance Manager and the $220 per hour figure for a Programmer Analyst are from SIFMA's *Management & Professional Earnings in the Securities Industry 2013*, modified by the Commission to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits and overhead.

[1488] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2). Of the $17,900,000 in aggregate total costs, $11,070,000 is identified (subtotal of FTE costs and outsourcing), but the remaining $6,830,000 is not identified in the CAT NMS Plan. The Commission believes that the $6,830,000 may be attributed to hardware costs because the Participants have not provided any hardware costs associated with data reporting elsewhere and the Commission believes that the Participants will likely incur external costs to purchase upgraded hardware to report data to the Central Repository.

[1489] ($10,300,000 anticipated initial FTE costs)/(20 SROs) = $515,000 in anticipated initial FTE costs per Participant. ($515,000 in anticipated initial FTE costs per Participant)/($424,350 FTE costs per Participant) = 1.214 anticipated FTEs per Participant for the implementation of data reporting. (1.214 FTEs) × (1,800 working hours per year) = 2,184.5 initial burden hours per Participant to implement CAT Data reporting.

[1490] ($770,000 anticipated initial third party costs)/(20 Participants) = $38,500 in initial anticipated third party costs per Participant.

(2) Ongoing, Annual Burden Hours and External Cost

Once a Participant has established the appropriate systems and processes required for collection and transmission of the required information to the Central Repository, the Commission preliminarily estimates that Rule 613 would impose on each Participant ongoing annual burdens associated with, among other things, personnel time to monitor each Participant's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems that might result in additional reports to the Central Repository. The CAT NMS Plan provides the following average aggregate costs that the Participants would expect to incur to maintain data reporting systems to be in compliance with Rule 613: $7,300,000 in anticipated annual FTE costs for operational, technical/development, and compliance functions related to data reporting; $720,000 in annual third party legal, consulting, and other costs;[1494] and $14,700,000 total annual costs.[1495]

Based on estimates provided in the CAT NMS Plan, the Commission believes that it would take each Participant 1,548 ongoing burden hours per year[1496] to continue compliance with Rule 613. The Commission preliminarily estimates that it would cost, on average, approximately $36,000 in ongoing third party legal and consulting and other costs[1497] and $370,000 in total ongoing external costs per Participant.[1498] Therefore, the Commission preliminarily estimates that the estimated aggregate ongoing burden for all Participants would be approximately 30,966 hours[1499] and an estimated aggregate ongoing external cost of $7,400,000.[1500]

c. Collection and Retention of NBBO, Last Sale Data and Transaction Reports

Rule 613(e)(7) provides that the CAT NMS Plan must require the Central Repository to collect and retain on a current and continuous basis NBBO information for each NMS security, transaction reports reported pursuant to an effective transaction reporting plan, and Last Sale Reports reported pursuant to the OPRA Plan.[1501] Additionally, the CAT NMS Plan must require the Central Repository to maintain this data in a format compatible with the order and event information consolidated and stored pursuant to Rule 613(c)(7).[1502] Further, the CAT NMS Plan must require the Central Repository to retain the information collected pursuant to paragraphs (c)(7) and (e)(7) of Rule 613 for a period of not less than five years in a convenient and usable uniform electronic format that is directly available and searchable electronically without any manual intervention.[1503] The Commission notes that the CAT NMS Plan includes these data as "SIP Data" to be collected by the Central Repository.[1504] The Commission believes the burden associated with SIP Data is included in the burden to the Participants associated with the implementation and maintenance of the Central Repository.

d. Surveillance

Rule 613(f) provides that the CAT NMS Plan must require that every national securities exchange and national securities association develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the consolidated audit trail. Rule 613(a)(3)(iv) provides that the CAT NMS Plan must require that the surveillance systems be implemented within fourteen months after effectiveness of the CAT NMS Plan.

(1) Initial Burden Hours and External Cost

The CAT NMS Plan states that the estimated total cost to the Participants to implement surveillance programs within the Central Repository is $23,200,000.[1505] This amount includes legal, consulting, and other costs of $560,000, as well as $17,500,000 in FTE costs for operational, technical/development, and compliance Staff to be engaged in the creation of surveillance programs.[1506]

Based on the estimates provided in the CAT NMS Plan, the Commission preliminarily estimates that the initial internal burden hours to implement new or enhanced surveillance systems reasonably designed to make use of the consolidated audit trail data for each Participant would be approximately 3,711.6 burden hours,[1507] for an aggregate initial burden hour amount of 74,232 burden hours.[1508] The Commission also estimates that each Participant would, on average, incur an initial external cost of approximately $28,000[1509] for outsourced legal, consulting and other costs in order to implement new or enhanced surveillance systems, for a total of $285,000 in initial external costs,[1510] for an aggregate one-time initial external cost of $5,700,000 across the 20 Participants to implement new or enhanced surveillance systems.[1511]

[1491] To determine the total initial external cost per Participant, the Commission subtracted the anticipated initial FTE cost estimates for the Participants as provided in the Plan from the total aggregate initial costs to the Participants and divided the remainder by 20 Participants. ($17,900,000 total aggregate initial cost to Participants) − ($10,300,000 initial FTE cost to Participants) = $7,600,000. ($7,600,000)/20 Participants = $380,000 in initial external costs per Participant. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(1) for the Participants' anticipated costs associated with the implementation of regulatory reporting to the Central Repository.

[1492] 43,690 initial burden hours = (20 Participants) × (2,184.5 initial burden hours).

[1493] $7,600,000 = ($380,000 in initial external costs) × (20 Participants).

[1494] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2). The CAT NMS Plan did not identify the other costs.

[1495] Of the $14,700,000 in aggregate total annual costs, $8,020,000 is identified (subtotal of FTE costs and outsourcing), but the remaining $6,680,000 is not identified in the CAT NMS Plan. The Commission believes that this amount may be attributed to hardware costs because the Participants have not provided any hardware costs associated with data reporting elsewhere and the Commission believes that the Participants will likely incur costs to upgrade their hardware to report data to the Central Repository.

[1496] ($7,300,000 in anticipated Participant annual FTE costs)/(20 Participants) = $365,000 in anticipated per Participant annual FTE costs. ($365,000 in anticipated per Participant FTE costs)/($424,350 FTE cost per Participant) = 0.86 anticipated FTEs per Participant. (0.86 FTEs) × (1,800 working hours per year) = 1,548.3 burden hours per Participant to maintain CAT Data reporting.

[1497] ($720,000 in annual third party costs)/(20 Participants) = $36,000 per Participant in anticipated annual third party costs.

[1498] To determine the total external annual cost per Participant, the Commission subtracted the anticipated annual FTE cost estimates for the Participants as provided in the Plan from the total aggregate annual costs to the Participants and divided the remainder by 20 Participants. ($14,700,000 total aggregate annual cost to Participants) − ($7,300,000 annual FTE cost to Participants) = $7,400,000. ($7,400,000)/20 Participants = $370,000 in annual external costs per Participant. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(1) for the Participants' anticipated maintenance costs associated with regulatory reporting to the Central Repository.

[1499] 30,966 annual burden hours = (20 Participants) × (1,548.3 annual burden hours).

[1500] $7,400,000 = ($370,000 in total annual external costs) × (20 Participants).

[1501] *See* 17 CFR 242.613(e)(7).

[1502] *Id.*

[1503] *See* 17 CFR 242.613(e)(8).

[1504] *See* CAT NMS Plan, *supra* note 3, at Section 6.5(a)(ii).

[1505] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2).

[1506] *Id.* The Commission also notes that based upon the data provided by the Participants, the source of the remaining $5,140,000 in initial costs to implement new or enhanced surveillance systems is unspecified. The Commission believes that this amount may be attributed to hardware costs because the Participants have not provided any hardware costs associated with surveillance elsewhere and the Commission believes that the Participants will likely incur costs to implement new or enhanced surveillance systems reasonably designed to make use of the consolidated audit trail data.

[1507] ($17,500,000 in anticipated initial FTE costs)/(20 Participants) = $875,000 in anticipated FTE costs per Participant. ($875,000 in anticipated initial FTE costs per Participant)/($424,350 FTE cost per Participant) = 2.06 anticipated initial FTEs

(2) Ongoing, Annual Burden Hours and External Cost

The CAT NMS Plan states that the estimated total annual cost associated with the maintenance of surveillance programs for the Participants is $87,700,000.[1512] This amount includes annual legal, consulting, and other costs of $1,000,000, as well as $66,700,000 in annual FTE costs for internal operational, technical/development, and compliance Staff to be engaged in the maintenance of surveillance programs.[1513] Based on the estimates provided in the CAT NMS Plan,[1514] the Commission preliminarily estimates that the ongoing internal burden hours to maintain the new or enhanced surveillance systems reasonably designed to make use of the consolidated audit trail data for each Participant would be approximately 14,146 annual burden hours,[1515] for an aggregate annual burden hour amount of 282,920 burden hours.[1516] The Commission also estimates that each Participant would, on average, incur an annual external cost of approximately $50,000[1517] for outsourced legal, consulting and other costs in order to maintain the new or enhanced surveillance systems, for a total estimated ongoing external cost of $1,050,000,[1518] for an estimated aggregate ongoing external cost of $21,000,000 across the 20 Participants to maintain the surveillance systems.[1519]

e. Written Assessment of Operation of the Consolidated Audit Trail

Rule 613(b)(6) provides that the CAT NMS Plan must require the Participants to provide the Commission a written assessment of the CAT's operation at least every two years, once the CAT NMS Plan is effective.[1520] The assessment must address, at a minimum, with respect to the consolidated audit trail: (i) An evaluation of its performance; (ii) a detailed plan for any potential improvements to its performance; (iii) an estimate of the costs associated with any such potential improvements; and (iv) an estimated implementation timeline for any such potential improvements, if applicable.[1521] Thus, the Participants must, among other things, undertake an analysis of the consolidated audit trail's technological and computer system performance.

The CAT NMS Plan states that the CCO would oversee the assessment required by Rule 613(b)(6), and would allow the Participants to review and comment on the assessment before it is submitted to the Commission.[1522] The CCO would be an employee of the Plan Processor and would be compensated by the Plan Processor.[1523] The Commission assumes that the overall cost and associated burden on the Participants to implement and maintain the Central Repository includes both the compensation for the Plan Processor as well as its employees for the implementation and maintenance of the Central Repository.

The Commission preliminarily estimates that it would take each Participant approximately 45 annual burden hours of internal legal, compliance, business operations, and information technology staff time to review and comment on the assessment prepared by the CCO of the operation of the consolidated audit trail as required by Rule 613(b)(6).[1524] The Commission preliminarily estimates that on average, each Participant would outsource 1.25 hours of legal time annually to assist in the review of the assessment, for an ongoing annual external cost of approximately $500.[1525] Therefore, the

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per Participant. (2.06 FTEs) × (1,800 working hours per year) = 3,711.6 initial burden hours per Participant to implement new or enhanced surveillance systems.

[1508] (3,711.6 initial burden hours per Participant to implement new or enhanced surveillance systems) × (20 Participants) = 74,232 aggregate initial burden hours.

[1509] $28,000 = $560,000/20 Participants.

[1510] $285,000 = ($23,200,000 in total initial surveillance costs—$17,500,000 in FTE costs)/(20 Participants).

[1511] $5,700,000 = $285,000 × 20 Participants.

[1512] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2).

[1513] *Id.* The Commission also notes that based upon the data provided by the Participants, the source of the remaining $21,000,000 in ongoing costs to maintain the new or enhanced surveillance systems is unspecified. The Commission believes that this amount may be attributed to hardware costs because the Participants have not provided any hardware costs associated with surveillance elsewhere and the Commission believes that the Participants would likely incur costs associated with maintaining the new or enhanced surveillance systems.

[1514] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(B)(2).

[1515] ($66,700,000 in anticipated ongoing FTE costs)/(20 Participants) = $3,335,000 in anticipated ongoing FTE costs per Participant. ($3,335,000 in anticipated ongoing FTE costs per Participant)/($424,350 FTE cost per Participant) = 7.86 anticipated FTEs per Participant. (7.86 FTEs) × (1,800 working hours per year) = 14,146 ongoing burden hours per Participant to maintain the new or enhanced surveillance systems.

[1516] (14,146 annual burden hours per Participant to maintain new or enhanced surveillance systems) × (20 Participants) = 282,920 aggregate annual burden hours.

[1517] $50,000 = $1,000,000 for ongoing legal, consulting and other costs associated with maintenance of surveillance programs/20 Participants.

[1518] $1,050,000 = ($87,700,000 in total ongoing surveillance costs − $66,700,000 in ongoing FTE costs)/20 Participants

[1519] $21,000,000 = $1,050,000 × 20 Participants.

[1520] 17 CFR 242.613(b)(6). *See also* Section IV.E.3.a, *supra*.

[1521] *See* 17 CFR 242.613(b)(6).

[1522] *See* CAT NMS Plan, *supra* note 3, at Section 6.6.

[1523] *Id.* at Section 6.2(a).

[1524] The Commission calculated the total estimated burden hours based on a similar formulation used for calculating the total estimated burden hours of Rule 613(i)'s requirement for a document addressing expansion of the CAT to other securities. *See* Section V.D.1.f., *infra*. The Commission assumes that the review and potential revision of the written assessment required by Rule 613(b)(6) would be approximately one-half as burdensome as the document required by Rule 613(i) as the Participants are delegating the responsibility to prepare the written assessment required by Rule 613(b)(6) to the CCO and the Participants would only need to review the written assessment and revise it as necessary. As noted in note 1530, *infra*, to estimate the Rule 613(i) burden, the Commission is applying the internal burden estimate provided in the CAT NMS Plan for Plan development over a 6-month period, and dividing the result in half. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii). To estimate the Rule 613(b)(6) written assessment burden, the Commission is dividing the result further by half. 0.667 FTEs required for all Participants per month to develop the CAT NMS Plan = (20 FTEs/30 months). 0.667 FTEs × 6 months = 4 FTEs. 4 FTEs/2 = 2 FTEs needed for all of the Participants to create and submit the Rule 613(i) document. 2 FTEs/2 = 1 FTE needed for all of the Participants to review and comment on the written assessment. (1 FTE × 1,800 working hours per year) = 1,800 ongoing annual burden hours per year for all of the Participants to review and comment on the written assessment. (1,800 burden hours/20 Participants) = 90 ongoing annual burden hours per Participant to review and comment on the written assessment prepared by the CCO. The Commission notes that this assessment must be filed with the Commission every two years and is providing an annualized estimate of the burden associated with the assessment as required for its Paperwork Reduction Act analysis. To provide an estimate of the annual burden associated with the assessment as required for its Paperwork Reduction Act analysis, Commission is dividing the 90 ongoing burden hours in half (over two years) = 45 ongoing annual burden hours per Participant to review and comment on the written assessment prepared by the CCO.

[1525] $500 = ($400 per hour rate for outside legal services) × (1.25 hours). The Commission based this estimate on the assumption that the written assessment required by Rule 613(b)(6) would require approximately one-half the effort of drafting and submitting the document required by Rule 613(i) regarding the expansion of the CAT to other securities because the Participants have delegated

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Commission preliminarily estimates that the ongoing annual burden of submitting a written assessment at least every two years, as required by Rule 613(b)(6), would be 45 ongoing burden hours per SRO plus $500 of external costs for outsourced legal counsel per Participant per year, for an estimated aggregate annual ongoing burden of 900 hours[1526] and an estimated aggregate ongoing external cost of $10,000.[1527]

f. Document on Expansion to Other Securities

Rule 613(i) provides that the CAT NMS Plan must require the Participants to jointly provide to the Commission, within six months after the CAT NMS Plan is effective, a document outlining how the Participants could incorporate into the consolidated audit trail information regarding: (1) Equity securities that are not NMS securities;[1528] (2) debt securities; and (3) primary market transactions in equity securities that are not NMS securities and debt securities.[1529] The document must also detail the order and Reportable Event data that each market participant may be required to provide, which market participants may be required to provide such data, an implementation timeline, and a cost estimate. Thus, the Participants must, among other things, undertake an analysis of technological and computer system acquisitions and upgrades that would be required to incorporate such an expansion.

The Commission preliminarily estimates that it would take each Participant approximately 180 burden hours of internal legal, compliance, business operations and information technology staff time to create a document addressing expansion of the consolidated audit trail to additional securities as required by Rule 613(i).[1530] The Commission preliminarily estimates that on average, each Participant would outsource 25 hours of external legal time to create the document, for an aggregate one-time external cost of approximately $10,000.[1531] Therefore, the Commission preliminarily estimates that the one-time initial burden of drafting the document required by Rule 613 would be 180 initial burden hours plus $10,000 in initial external costs for outsourced legal counsel per Participant, for an estimated aggregate initial burden of 3,600 hours and an estimated aggregate initial external cost of $200,000.[1532]

2. Burden on Members of National Securities Exchanges and National Securities Associations

a. Data Collection and Reporting

Rule 613(c)(1) requires the CAT NMS Plan to provide for an accurate, time-sequenced record of orders beginning with the receipt or origination of an order by a broker-dealer member of a Participant, and further documenting the life of the order through the process of routing, modification, cancellation and execution (in whole or in part) of the order. Rule 613(c) requires the CAT NMS Plan to impose requirements on broker-dealer members to record and report CAT information to the Central Repository in accordance with specified timelines.

The Commission acknowledges the inherent difficulty in establishing precise burden estimates because the Commission does not know the exact method of data reporting the Participants would decide for broker-dealers. For these estimates, the Commission is relying, in part, on the cost data provided by the Participants in the CAT NMS Plan,[1533] and, as noted earlier, on its own estimates of the costs that broker-dealers are likely to face for CAT implementation and ongoing reporting in compliance with Rule 613.[1534]

The Commission's estimates delineate broker-dealer firms by whether they insource or outsource, or are likely to insource or outsource, CAT Data reporting obligations.[1535] The Commission preliminarily believes that firms that currently report high numbers of OATS ROEs strategically would decide to either self-report their CAT Data or outsource their CAT Data reporting functions, while the firms with the lowest levels of activity would be unlikely to have the infrastructure and specialized employees necessary to insource CAT Data reporting and would almost certainly outsource their CAT Data reporting functions.[1536] The Commission recognizes that more active firms that will likely be CAT Reporters and insource regulatory data reporting functions may not have current OATS reporting obligations because they either are not FINRA members, or because they do not trade in NMS equity securities.[1537]

The Commission preliminarily estimates that there are 126 OATS-reporting Insourcers and 45 non-OATS reporting Insourcers.[1538] The Commission's estimation categorizes the remaining 1,629 broker-dealers that the Plan anticipates would have CAT Data reporting obligations as Outsourcers.[1539]

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the responsibility to draft the written assessment on the CCO, rather than having to draft it themselves (as with the expansion report), but would also have to review the written assessment and revise it as necessary. *See* Section V.D.1.f., *infra*. Because the written assessment is a biennial requirement, the Commission is further dividing the cost of the written assessment in half (over two years) to estimate the annual ongoing external cost per Participant for outside legal services to review and comment on the written assessment prepared by the CCO.

[1526] 900 ongoing annual burden hours = (45 ongoing annual burden hours) × (20 Participants).

[1527] $10,000 = 20 Participants × ($400 per hour rate for outside legal services) × (1.25 hours).

[1528] As noted above, the CAT NMS Plan would require the inclusion of OTC Equity Securities, while Rule 613 does not include such a requirement. *See supra* note 1408.

[1529] *See* 17 CFR 242.613(i).

[1530] The Commission is basing this estimate on the internal burden provided in the CAT NMS Plan related to the development of the CAT NMS Plan. *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii) (stating "[t]he Participants estimate that they have collectively contributed 20 FTEs in the first 30 months of the CAT NMS Plan development process"). Because this document is much more limited in scope than the CAT NMS Plan, and because the Commission assumes that in drafting the CAT NMS Plan, the Participants have already contributed time toward considering how the CAT can be expected to be expanded in accordance with Rule 613(i), the Commission is applying the CAT NMS Plan development internal burden over a 6-month period (Rule 613(i) requires this document to be submitted to the Commission within six months after effectiveness of the CAT NMS Plan), divided by half. 0.667 FTEs required for all Participants per month to develop the CAT NMS Plan = (20 FTEs/30 months). 0.667 FTEs × 6 months = 4 FTEs. 4 FTEs/2 = 2 FTEs needed for all of the Participants to create and submit the document. 2 FTEs × 1,800 working hours per year = 3,600 burden hours. 3,600 burden hours/20 Participants = 180 burden hours per Participant to create and file the document.

[1531] $10,000 = (25 hours of outsourced legal time per Participant) × ($400 per hour rate for outside legal services). The Commission derived the total estimated cost for outsourced legal counsel based on the assumption that the report required by Rule 613 would require approximately fifteen percent of the Commission's approximated burden of drafting and filing the CAT NMS Plan. This assumption is based on the Participants leveraging their knowledge gained from their drafting and filing of the CAT NMS Plan and applying it to efficiently preparing the report required by Rule 613 with respect to other securities' order and Reportable Events, implementation timeline and cost estimates.

[1532] The initial burden hour estimate is based on: (20 Participants) × (180 initial burden hours to draft the report). The initial external cost estimate is based on: (20 Participants) × ($10,000 for outsourced legal counsel).

[1533] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b).

[1534] *See* Sections IV.F.1.c(1) and IV.F.1.c(2), *supra*.

[1535] *See* Section IV.F.1.c(2)B, *supra*.

[1536] *Id.*

[1537] The Commission also preliminarily recognizes as discussed above that some broker-dealer firms may strategically choose to outsource despite the Plan's working assumption that these broker-dealers would insource their regulatory data reporting functions.

[1538] *See* Section IV.F.1.c(2)B, *infra*.

[1539] *Id.*

(1) Insourcers

A. Large Non-OATS Reporting Broker-Dealers

i. Initial Burden Hours and External Cost

The Commission relies on the Reporters Study's large broker-dealer cost estimates in estimating costs for large broker-dealers that can practicably decide between insourcing or outsourcing their regulatory data reporting functions. The Commission estimates that there are 14 large broker-dealers that are not OATS reporters currently in the business of electronic liquidity provision that would be classified as Insourcer firms.[1540]

Additionally, the Commission estimates that there are 31 broker-dealers that may transact in options but not in equities that can be classified as Insourcer firms.[1541] Although the Exemptive Relief may relieve these firms of the obligation to report their option quoting activity to the Central Repository, these firms may have customer orders and other activity off-exchange that would cause them to incur a CAT reporting obligation.

The Commission assumes the 31 options firms and 14 ELPs would be typical of the Reporters Study's large, non-OATS reporting firms; for these firms, the Commission relies on the cost estimates provided under Approach 1[1542] for large, non-OATS reporting firms in the CAT NMS Plan.

The CAT NMS Plan provides the following average initial external cost and FTE count figures that a large non-OATS reporting broker-dealer would expect to incur to adopt the systems changes needed to comply with the data reporting requirements of Rule 613 under Approach 1: $450,000 in external hardware and software costs; 8.05 internal FTEs;[1543] and $9,500 in external third party/outsourcing costs.[1544] Based on this information, the Commission preliminarily estimates that the average initial burden associated with implementing regulatory data reporting to capture the required information and transmit it to the Central Repository in compliance with the Rule for each large, non-OATS reporting broker-dealer would be approximately 14,490 initial burden hours.[1545]

The Commission also preliminarily estimates that these broker-dealers would, on average, incur approximately $450,000 in initial costs for hardware and software to implement the systems changes needed to capture the required information and transmit it to the Central Repository, and an additional $9,500 in initial third party/outsourcing costs.[1546] Therefore, the Commission preliminarily estimates that the average one-time initial burden per ELP and options market-making firm would be 14,490 internal burden hours and external costs of $459,500,[1547] for an estimated aggregate initial burden of 652,050 hours[1548] and an estimated aggregate initial external cost of $20,677,500.[1549]

ii. Ongoing, Annual Burden Hours in External Cost

Once a large non-OATS reporting broker-dealer has established the appropriate systems and processes required for collection and transmission of the required information to the Central Repository, the Commission preliminarily estimates that the Rule would impose ongoing annual burdens associated with, among other things, personnel time to monitor each large non-OATS reporting broker-dealer's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems that might result in additional reports to the Central Repository. The CAT NMS Plan provides the following average ongoing external cost and internal FTE count figures that a large non-OATS reporting broker-dealer would expect to incur to maintain data reporting systems to be in compliance with Rule 613: $80,000 in external hardware and software costs; 7.41 internal FTEs;[1550] and $1,300 in external third party/outsourcing costs.[1551] Based on this information, the Commission preliminarily believes that it would take a large non-OATS reporting broker-dealer 13,338 burden hours per year[1552] to continue to comply with the Rule. The Commission also preliminarily estimates that it would cost, on average, approximately $80,000 per year per large non-OATS reporting broker-dealer to maintain systems connectivity to the Central Repository and purchase any necessary hardware, software, and other materials, and an additional $1,300 in third party/outsourcing costs.[1553]

Therefore, the Commission preliminarily estimates that the average ongoing annual burden per large non-OATS reporting broker-dealer would be approximately 13,338 hours, plus $81,300 in external costs[1554] to maintain the systems necessary to collect and transmit information to the Central Repository, for an estimated aggregate ongoing burden of 600,210 hours[1555] and an estimated aggregate ongoing external cost of $3,658,500.[1556]

[1540] These broker-dealers are not FINRA members and thus have no regular OATS reporting obligations. *See supra* note 937.

[1541] *See supra* note 939.

[1542] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(i)(A)(2). The Reporters Study requested broker-dealer respondents to provide estimates to report to the Central Repository under two approaches. Approach 1 assumes CAT Reporters would submit CAT Data using their choice of industry protocols. Approach 2 assumes CAT Reporters would submit data using a pre-specified format. Approach 1's aggregate costs are higher than those for Approach 2 for all market participants except in one case where service bureaus have lower Approach 1 costs. *See supra* note 946. For purposes of this Paperwork Reduction Act analysis, the Commission is not relying on the cost estimates for Approach 2 because overall the Approach 1 aggregate estimates represent the higher of the proposed approaches. The Commission believes it would be more comprehensive to use the higher of the two estimates for its Paperwork Reduction Act analysis estimates.

[1543] Approach 1 also provided $3,200,000 in initial internal FTE costs. The Commission believes the $3,200,000 in internal FTE costs is the Participants' estimated cost of the 8.05 FTEs. (8.05 FTEs) × ($401,440 Participants' assumed annual cost per FTE provided in the CAT NMS Plan) = $3,231,592. *See* CAT NMS Plan, *supra* note 3, at n. 192. *See also supra* note 1487.

[1544] *See* CAT NMS Plan, *supra* note 3, at Section B.7(b)(iii)(c)(2)(a). The Commission believes that the third party/outsourcing costs may be attributed to the use of service bureaus (potentially), technology consulting, and legal services.

[1545] 14,490 initial burden hours = (8.05 FTEs for implementing CAT Data reporting systems) × (1,800 working hours per year).

[1546] *See supra* note 1544.

[1547] ($450,000 in initial hardware and software costs) + ($9,500 initial third party/outsourcing costs) = $459,500 in initial external costs to implement data reporting systems.

[1548] The Commission preliminarily estimates that 45 large non-OATS reporting broker-dealers would be impacted by this information collection. (45 large non-OATS reporting broker-dealers) × (14,490 burden hours) = 652,050 initial burden hours to implement data reporting systems.

[1549] ($450,000 in hardware and software costs) + ($9,500 third party/outsourcing costs) × 45 large, non-OATS reporting broker-dealers = $20,677,500 in initial external costs to implement data reporting systems.

[1550] Approach 1 also provided $3,000,000 in internal FTE costs related to maintenance. The Commission believes the $3,000,000 in ongoing internal FTE costs is the Participants' estimated cost of the 7.41 FTEs. (7.41 FTEs) × ($401,440 Participants' assumed annual cost per FTE provided in the CAT NMS Plan) = $2,974,670. *See* CAT NMS Plan, *supra* note 3, at n.192. *See also supra* note 1487.

[1551] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C)(2)(b). The CAT NMS Plan did not break down these third party costs into categories.

[1552] 13,338 ongoing burden hours = (7.41 ongoing FTEs to maintain CAT data reporting systems) × (1,800 working hours per year).

[1553] *See supra* note 1544; CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C)(2)(b).

[1554] ($80,000 in ongoing external hardware and software costs) + ($1,300 ongoing external third party/outsourcing costs) = $81,300 in ongoing external costs per large non-OATS reporting broker-dealer.

B. Large OATS-Reporting Broker-Dealers

i. Initial Burden Hours and External Cost

Based on the Commission's analysis of data provided by FINRA and discussions with market participants, the Commission estimates that 126 broker-dealers, which reported more than 350,000 OATS ROEs between June 15 and July 10, 2015, would strategically decide to either self-report CAT Data or outsource their CAT data reporting functions.[1557] To conduct its Paperwork Burden Analysis for the 126 broker-dealers, the Commission is relying on the Reporters Study estimates used by the CAT NMS Plan of expected costs that a large OATS-reporting broker-dealer would incur as a result of the implementation of the consolidated audit trail under Approach 1.[1558]

The CAT NMS Plan provides the following average initial external cost and internal FTE count figures that a large OATS-reporting broker-dealer would expect to incur as a result of the implementation of the consolidated audit trail under Approach 1: $750,000 in hardware and software costs; 14.92 internal FTEs;[1559] and $150,000 in external third party/outsourcing costs.[1560] Based on this information the Commission preliminarily estimates that the average initial burden to develop and implement the needed systems changes to capture the required information and transmit it to the Central Repository in compliance with the Rule for large OATS-reporting broker-dealers would be approximately 26,856 internal burden hours.[1561] The Commission also preliminarily estimates that these large OATS-reporting broker-dealers would, on average, incur approximately $750,000 in initial external costs for hardware and software to implement the systems changes needed to capture the required information and transmit it to the Central Repository, and an additional $150,000 in initial external third party/outsourcing costs.[1562]

Therefore, the Commission preliminarily estimates that the average one-time initial burden per large OATS-reporting broker-dealer would be 26,856 burden hours and external costs of $900,000,[1563] for an estimated aggregate initial burden of 3,383,856 hours[1564] and an estimated aggregate initial external cost of $113,400,000.[1565]

ii. Ongoing, Annual Burden Hours and External Cost

Once a large OATS-reporting broker-dealer has established the appropriate systems and processes required for collection and transmission of the required information to the Central Repository, the Commission preliminarily estimates that the Rule would impose on each broker-dealer ongoing annual burdens and costs associated with, among other things, personnel time to monitor each broker-dealer's reporting of the required data and the maintenance of the systems to report the required data; and implementing changes to trading systems which might result in additional reports to the Central Repository.

The CAT NMS Plan provides the following average ongoing external cost and FTE count figures that a large OATS-reporting broker-dealer would expect to incur to maintain data reporting systems to be in compliance with Rule 613: $380,000 in ongoing external hardware and software costs; 10.03 internal FTEs;[1566] and $120,000 in ongoing external third party/outsourcing costs.[1567] Based on this information the Commission preliminarily believes that it would take a large OATS-reporting broker-dealer 18,054 ongoing burden hours per year[1568] to continue compliance with the Rule. The Commission preliminarily estimates that it would cost, on average, approximately $380,000 per year per large OATS-reporting broker-dealer to maintain systems connectivity to the Central Repository and purchase any necessary hardware, software, and other materials, and an additional $120,000 in external ongoing third party/outsourcing costs.[1569]

Therefore, the Commission preliminarily estimates that the average ongoing annual burden per large OATS-reporting broker-dealer would be approximately 18,054 burden hours, plus $500,000 in external costs[1570] to maintain the systems necessary to collect and transmit information to the Central Repository, for an estimated aggregate burden of 2,274,804 hours[1571] and an estimated aggregate ongoing external cost of $63,000,000.[1572]

[1555] The Commission estimates that 45 large non-OATS reporting broker-dealers would be impacted by this information collection. (45 large non-OATS reporting broker-dealers) × (13,338 burden hours) = 600,210 aggregate ongoing burden hours.

[1556] ($80,000 in ongoing external hardware and software costs) + ($1,300 ongoing external third party/outsourcing costs) × (45 large non-OATS reporting broker-dealers) = $3,658,500 in aggregate ongoing external costs.

[1557] *See* Section IV.F.1.c.2.B and Section IV.F.1.c(2)B.i, *supra*. *See also supra* note 901, stating that the Commission believes that broker-dealers that report fewer than 350,000 OATS ROEs per month are unlikely to be large enough to support the infrastructure required for insourcing data reporting activities.

[1558] *See supra* note 1544.

[1559] Approach 1 also provided $6,000,000 in initial internal FTE costs. The Commission preliminarily believes the $6,000,000 in initial internal FTE costs is the Participants' estimated cost of the 14.92 FTEs. (14.92 FTEs) × ($401,440 Participants' assumed annual cost per FTE provided in the CAT NMS Plan) = $5,989,485. *See* CAT NMS Plan, *supra* note 3, at n. 192. *See also supra* note 1487.

[1560] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C)(2)(a). The CAT NMS Plan did not break down these third party costs into categories. The Commission preliminarily believes that these costs may be attributed to the use of service bureaus, technology consulting, and legal services.

[1561] 26,856 initial burden hours per large OATS-reporting broker-dealer = (14.92 FTEs for implementation of CAT data reporting systems) × (1,800 working hours per year).

[1562] *See* CAT NMS Plan, *supra* note 3, at Section B.7(b)(iii)(C)(2)(a).

[1563] ($750,000 in initial external hardware and software costs) + ($150,000 initial external third party/outsourcing costs) = $900,000 in initial external costs per large OATS-reporting broker-dealer to implement CAT data reporting systems.

[1564] The Commission preliminarily estimates that 126 large OATS-reporting broker-dealers would be impacted by this information collection. 126 large OATS-reporting broker-dealers × 26,856 burden hours = 3,383,856 initial burden hours to implement data reporting systems.

[1565] ($750,000 in initial external hardware and software costs) + ($150,000 initial external third party/outsourcing costs) × 126 large OATS-reporting broker-dealers = $113,400,000 in initial external costs to implement data reporting systems.

[1566] Approach 1 also provided $4,000,000 in internal FTE costs related to maintenance. The Commission believes the $4,000,000 in ongoing internal FTE costs is the Participants' estimated cost of the 10.03 FTEs. (10.03 FTEs) × ($401,440 Participants' assumed annual cost per FTE provided in the CAT NMS Plan) = $4,026,443. *See* CAT NMS Plan, *supra* note 3, at n. 192. *See also supra* note 1487.

[1567] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C)(2)(b). The CAT NMS Plan did not categorize these third party costs. The Commission preliminarily believes that these costs may be attributed to the use of service bureaus, technology consulting, and legal services.

[1568] 18,054 ongoing burden hours = (10.03 ongoing FTEs for maintenance of CAT data reporting systems) × (1,800 working hours per year).

[1569] *See* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(iii)(C)(2)(b).

[1570] ($380,000 in ongoing external hardware and software costs + $120,000 in ongoing external third party/outsourcing costs) = $500,000 in ongoing external costs per large OATS-reporting broker-dealer.

[1571] The Commission preliminarily estimates that 126 large OATS-reporting broker-dealers would be impacted by this information collection. (126 large OATS-reporting broker-dealers) × (18,054 burden hours) = 2,274,804 aggregate ongoing burden hours.

[1572] ($380,000 in ongoing external hardware and software costs + $120,000 in ongoing external third party/outsourcing costs) × 126 large OATS-reporting broker-dealers = $63,000,000 in aggregate ongoing external costs.

(2) Outsourcing Firms

A. Small OATS-Reporting Broker-Dealers

i. Initial Burden Hours and External Cost

Based on data provided by FINRA, the Commission estimates that there are 806 broker-dealers that report fewer than 350,000 OATS ROEs monthly. The Commission preliminarily believes that these broker-dealers generally outsource their regulatory reporting obligations because during the period June 15–July 10, 2015, approximately 88.9% of their 350,000 OATS ROEs were reported through service bureaus, with 730 of these broker-dealers reporting more than 99% of their OATS ROEs through one or more service bureaus.[1573] The Commission estimates that these firms currently spend an aggregate of $100.1 million on annual outsourcing costs.[1574] The Commission estimates these 806 broker-dealers would spend $100.2 million in aggregate to outsource their regulatory data reporting to service bureaus to report in accordance with Rule 613,[1575] or $124,373 per broker-dealer.[1576] These external outsourcing cost estimates are calculated using the information from Staff discussions with service bureaus and other market participants, as applied to data provided by FINRA.[1577]

Firms that outsource their regulatory data reporting still face internal staffing burdens associated with this activity. These employees perform activities such as answering inquiries from their service bureaus, and investigating reporting exceptions. Based on conversations with market participants, the Commission estimates that these firms currently have 0.5 full-time employees devoted to these activities.[1578] The Commission estimates that these firms would need to hire one additional full-time employee for one year to implement CAT reporting requirements.[1579]

Based on this information, the Commission preliminarily estimates that the average initial burden to implement the needed systems changes to capture the required information and transmit it to the Central Repository in compliance with the CAT NMS Plan for small OATS-reporting broker-dealers would be approximately 1,800 burden hours.[1580] The Commission believes the burden hours would be associated with work performed by internal technology, compliance and legal staff in connection with the implementation of CAT data reporting. The Commission also preliminarily estimates that each small OATS-reporting broker-dealer would incur approximately $124,373 in initial external outsourcing costs.[1581] Therefore, the Commission preliminarily estimates that the average one-time initial burden per small OATS-reporting broker-dealer would be 1,800 burden hours and external costs of $124,373, for an estimated aggregate initial burden of 1,450,800 hours [1582] and an estimated aggregate initial external cost of $100,244,638.[1583]

ii. Ongoing, Annual Burden Hours and External Cost

Small OATS-reporting broker-dealers that outsource their regulatory data reporting would likely face internal staffing burdens and external costs associated with ongoing activity, such as maintaining any systems that transmit data to their service providers. Based on conversations with market participants, the Commission estimates these firms would need 0.75 FTEs on an ongoing basis to maintain CAT reporting.[1584]

Based on this information the Commission preliminarily believes that it would take a small OATS-reporting broker-dealer 1,350 ongoing burden hours per year [1585] to continue compliance with the Rule. The Commission believes the burden hours would be associated with work performed by internal technology, compliance and legal staff in connection with the ongoing operation of CAT Data reporting. The Commission preliminarily estimates that it would cost, on average, approximately $124,373 in ongoing external outsourcing costs [1586] to ensure ongoing compliance with Rule 613.

Therefore, the Commission preliminarily estimates that the average ongoing annual burden per small OATS-reporting broker-dealer would be approximately 1,350 hours, plus $124,373 in external costs, for an estimated aggregate ongoing burden of 1,088,100 hours [1587] and an estimated aggregate ongoing external cost of $100,244,638.[1588]

B. Non-OATS Reporters

i. Initial Burden Hours and External Cost

In addition to firms that currently report to OATS, the Commission estimates there are 799 broker-dealers that are currently exempt from OATS reporting rules due to firm size, or excluded because all of their order flow is routed to a single OATS reporter, such as a clearing firm, that would incur CAT reporting obligations.[1589] A further 24 broker-dealers have SRO memberships only with one Participant;[1590] the Commission believes this group is comprised mostly of floor brokers and further preliminarily believes these firms would experience CAT implementation and ongoing reporting costs similar in magnitude to small equity broker-dealers that currently have no OATS reporting responsibilities.[1591]

[1573] *See* Section IV.F.1.c(2)B.i, *supra.* Because of the extensive use of service bureaus in these categories of broker-dealers, the Commission assumes that these broker-dealers are likely to use service bureaus to accomplish their CAT data reporting.

[1574] The average broker-dealer in this category reported 15,185 OATS ROEs from June 15–July 10, 2015; the median reported 1,251 OATS ROEs. Of these broker-dealers, 39 reported more than 100,000 OATS ROEs during the sample period. *See* Section IV.F.1.c(2)B.ii, *supra.*

[1575] *Id.*

[1576] $124,373 = $100,200,000/806 broker-dealers. This amount is the average estimated annual outsourcing cost to firms that currently report fewer than 350,000 OATS ROEs per month. *Id.*

[1577] *See* Section IV.F.1.c(2)B.ii, *supra.*

[1578] *Id.*

[1579] *Id.*

[1580] This estimate assumes that, based on the expected FTE count provided, a small OATS-reporting broker-dealer would have to hire 1 new FTE for implementation. The salary attributed to the 1 FTE would be (1 × $424,350 FTE cost) = $424,350 per year. To determine the number of burden hours to be incurred by the current 0.5 FTE for implementation, multiply 0.5 FTE by 1,800 hours per year = 900 initial burden hours.

[1581] *See* Section IV.F.1.c(2)B.ii, *supra.* The Commission preliminarily believes the outsourcing cost would be the cost of the service bureau, which would include the compliance and legal costs associated with changing to CAT Data reporting. The Commission assumes these costs of changing to CAT would be included in the cost of the service bureau because the broker-dealers would be relying on the expertise of the service bureau to report their data to CAT on their behalf. *See supra* note 941.

[1582] The Commission preliminarily estimates that 806 small OATS-reporting broker-dealers would be impacted by this information collection. (806 small OATS-reporting broker-dealers × 1,800 burden hours) = 1,450,800 aggregate initial burden hours.

[1583] ($124,373 in outsourcing costs) × (806 small OATS-reporting broker-dealers) = $100,244,638 in aggregate initial external costs.

[1584] *See* Section IV.F.1.c(2)B.ii, *supra.*

[1585] 1,350 ongoing burden hours = (0.75 FTE for maintenance of CAT Data reporting systems) × (1,800 working hours per year).

[1586] *See* Section IV.F.1.c(2)B.ii, *supra. See supra* note 1581.

[1587] The Commission preliminarily estimates that 806 small OATS-reporting broker-dealers would be impacted by this information collection. (806 small OATS-reporting broker-dealers × 1,350 burden hours) = 1,088,100 aggregate ongoing burden hours to ensure ongoing compliance with Rule 613.

[1588] $100,244,638 = $124,373 in ongoing outsourcing costs × 806 broker-dealers.

[1589] *See* Section IV.F.1.c(2)B.ii, *supra.* Rule 613 does not exclude from data reporting obligations SRO members that quote or execute transactions in NMS Securities and Listed Options that route to a single market participant. *See also* CAT NMS Plan, *supra* note 3, at Appendix C, Section B.7(b)(ii)(B)(2).

[1590] *See* Section IV.F.1.c(2)B.ii, *supra.*

The Commission assumes these broker-dealers would have very low levels of CAT reporting, similar to those of the lowest activity firms that currently report to OATS. For these firms, the Commission assumes that under CAT they would incur the average estimated service bureau cost of broker-dealers that currently report fewer than 350,000 OATS ROEs per month, which is $124,373 annually.[1592] Furthermore, because these firms have more limited data reporting requirements than other firms, the Commission assumes these firms currently have only 0.1 full-time employees currently dedicated to regulatory data reporting activities.[1593] The Commission assumes these firms would require 2 full-time employees for one year to implement CAT.[1594]

Based on this information, the Commission preliminarily estimates that the average initial burden to develop and implement the needed systems changes to capture the required information and transmit it to the Central Repository in compliance with the Rule for small, non-OATS-reporting broker-dealers would be approximately 3,600 initial burden hours.[1595] The Commission believes the burden hours would be associated with work performed by internal technology, compliance and legal staff in connection with the implementation of CAT Data reporting. The Commission also preliminarily estimates that each small non-OATS-reporting broker-dealer would incur approximately $124,373 in initial external outsourcing costs.[1596]

Therefore, the Commission preliminarily estimates that the average one-time initial burden per small OATS-reporting broker-dealer would be 3,600 burden hours and external costs of $124,373 for an estimated aggregate initial burden of 2,962,800 hours[1597] and an estimated aggregate initial external cost of $102,358,979.[1598]

ii. Ongoing, Annual Burden Hours and External Cost

Small non-OATS-reporting broker-dealers that outsource their regulatory data reporting would likely face internal staffing burdens and costs associated with ongoing activity, such as maintaining any systems that transmit data to their service providers. Based on conversations with market participants, the Commission estimates these firms would need 0.75 full-time employees annually to maintain CAT reporting.

Based on this information the Commission preliminarily believes that it would take a small non-OATS-reporting broker-dealer 1,350 ongoing burden hours per year[1599] to continue compliance with the Rule. The Commission preliminarily estimates that it would cost, on average, approximately $124,373 in ongoing external outsourcing costs[1600] to ensure ongoing compliance with Rule 613. Therefore, the Commission preliminarily estimates that the average ongoing annual burden per small non-OATS-reporting broker-dealer would be approximately 1,350 hours, plus $124,373 in external costs, for an estimated aggregate ongoing burden of 1,111,050 hours[1601] and an estimated aggregate ongoing external cost of $102,358,979.[1602]

E. Collection of Information is Mandatory

Each collection of information discussed above would be a mandatory collection of information.

F. ConfidentialityC

Rule 613 requires that the information to be collected and electronically provided to the Central Repository would only be available to the national securities exchanges, national securities association, and the Commission for the purpose of performing their respective regulatory and oversight responsibilities pursuant to the federal securities laws, rules and regulations. Further, the CAT NMS Plan is required to include policies and procedures to ensure the security and confidentiality of all information submitted to the Central Repository, and to ensure that all SROs and their employees, as well as all employees of the Central Repository, shall use appropriate safeguards to ensure the confidentiality of such data and shall agree not to use such data for any purpose other than surveillance and regulatory purposes. The Commission will receive confidential information. To the extent that the Commission does receive confidential information pursuant to this collection of information, such information will be kept confidential, subject to the provisions of applicable law.

G. Recordkeeping Requirements

National securities exchanges and national securities associations would be required to retain records and information pursuant to Rule 17a–1 under the Exchange Act.[1603] Broker-dealers would be required to retain records and information in accordance with Rule 17a–4 under the Exchange Act.[1604] The Plan Processor would be required to retain the information reported to Rule 613(c)(7) and (e)(6) for a period of not less than five years.[1605]

H. Request for Comments

Pursuant to 44 U.S.C. 3506(c)(2)(A), the Commission solicits comment to:

(1) Evaluate whether the proposed collections are necessary for the proper performance of our functions, including whether the information shall have practical utility;

(2) Evaluate the accuracy of our estimate of the burden of each collection of information;

(3) Determine whether there are ways to enhance the quality, utility, and clarity of the information to be collected; and

(4) Evaluate whether there are ways to minimize the burden of each collection of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology.

Persons submitting comments on the collection of information requirements should direct them to the Office of Management and Budget, Attention: Desk Officer for the Securities and Exchange Commission, Office of Information and Regulatory Affairs,

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[1591] *Id.*

[1592] *Id.*

[1593] *Id.*

[1594] *Id.*

[1595] 3,600 initial burden hours = (2 FTEs for implementation of CAT Data reporting systems) × (1,800 working hours per year).

[1596] *See supra* note 1590.

[1597] The Commission preliminarily estimates that 823 small non-OATS-reporting broker-dealers would be impacted by this information collection. (823 small non-OATS-reporting broker-dealers × 3,600 burden hours) = 2,962,800 aggregate initial burden hours.

[1598] ($124,373 in outsourcing costs) × (823 small non-OATS-reporting broker-dealers) = $102,358,979 in aggregate initial external costs.

[1599] 1,350 ongoing burden hours = (0.75 FTEs for maintenance of CAT data reporting systems) × (1,800 working hours per year).

[1600] The Commission assumes these firms would have very low levels of CAT reporting, similar to those of the lowest activity firms that currently report to OATS. For these firms, the Commission assumes that under CAT they would incur the average estimated service bureau cost of firms that currently OATS report fewer than 350,000 OATS ROEs per month of $124,373 annually.

[1601] The Commission preliminarily estimates that 823 small non-OATS-reporting broker-dealers would be impacted by this information collection. (823 small non-OATS-reporting broker-dealers × 1,350 burden hours) = 1,111,050 aggregate ongoing burden hours to ensure ongoing compliance with Rule 613.

[1602] ($124,373 in ongoing external outsourcing costs) × 823 = $102,358,979 in aggregate ongoing external costs to ensure ongoing compliance with Rule 613.

[1603] 17 CFR 240.17a–1.

[1604] 17 CFR 240.17a–4.

[1605] 17 CFR 242.613(c)(7) and (e)(6).

Washington, DC 20503, and should also send a copy of their comments to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090, with reference to File No. 4–698. Requests for materials submitted to OMB by the Commission with regard to these collections of information should be in writing, with reference to File No. 4–698, and be submitted to the Securities and Exchange Commission, Office of FOIA/PA Services, 100 F Street NE., Washington, DC 20549–2736. As OMB is required to make a decision concerning the collections of information between 30 and 60 days after publication in the **Federal Register**, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

VI. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the CAT NMS Plan is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number 4–698 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number 4–698. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the CAT NMS Plan that are filed with the Commission, and all written communications relating to the CAT NMS Plan between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between 10:00 a.m. and 3:00 p.m. Copies of the submission will also be available for inspection and copying at the Participants' principal offices. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number 4–698 and should be submitted on or before July 18, 2016.

By the Commission.

Brent J. Fields,

Secretary.

EXHIBIT A

CAT NMS PLAN

LIMITED LIABILITY COMPANY AGREEMENT
OF
CAT NMS, LLC
a Delaware Limited Liability Company

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APPENDIX A

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LIMITED LIABILITY COMPANY AGREEMENT
OF
CAT NMS, LLC
a Delaware Limited Liability Company

This Limited Liability Company Agreement (including its Recitals and the Exhibits, Appendices, Attachments, and Schedules identified herein, this "Agreement") of CAT NMS, LLC, a Delaware limited liability company (the "Company"), dated as of the __ day of ______, ____, is made and entered into by and among the Participants.

RECITALS

A. Prior to the formation of the Company, in response to SEC Rule 613 requiring national securities exchanges and national securities associations to submit a national market system plan to the Securities and Exchange Commission ("Commission" or "SEC") to create, implement and maintain a consolidated audit trail, such national securities exchanges and national securities associations, pursuant to SEC Rule 608(a)(3), which authorizes them to act jointly in preparing, filing and implementing national market system plans, developed the National Market System Plan Governing the Process for Selecting a Plan Processor and Developing a Plan for the Consolidated Audit Trail (the "Selection Plan"). The Selection Plan was approved by the Commission on February 21, 2014, amended on June 17, 2015 and September 24, 2015, and, by its terms, shall automatically terminate upon the Commission's approval of this Agreement.

B. The Participants have now determined that it is advantageous and desirable to conduct in a limited liability company the activities they have heretofore conducted as parties to the Selection Plan, and have formed the Company for this purpose. This Agreement, which takes the place of the Selection Plan, is a National Market System Plan as defined in SEC Rule 600(b)(43), and serves as the National Market System Plan required by SEC Rule 613. The Participants shall jointly own the Company, which shall create, implement, and maintain the CAT and the Central Repository pursuant to SEC Rule 608 and SEC Rule 613.

C. This Agreement incorporates the exemptive relief from certain provisions of SEC Rule 613 requested in the original and supplemental request letters submitted by the Participants to the Commission, as described further in Appendix C ("Exemptive Request Letters").

ARTICLE I

DEFINITIONS

Section 1.1. Definitions. As used throughout this Agreement (including, for the avoidance of doubt, the Exhibits, Appendices, Attachments, Recitals and Schedules identified in this Agreement):

"Account Effective Date" means: (a) with regard to those circumstances in which an Industry Member has established a trading relationship with an institution but has not established an account with that institution, (i) when the trading relationship was established prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), either (A) the date the relationship identifier was established within the Industry Member, (B) the date when trading began (i.e., the date the first order was received) using the relevant relationship identifier, or (C) if both dates are available, the earlier date will be used to the extent that the dates differ; or (ii) when the trading relationship was established on or after the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), the date the Industry Member established the relationship identifier, which would be no later than the date the first order was received; (b) where an Industry Member changes back office providers or clearing firms prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), the date an account was established at the relevant Industry Member, either directly or via transfer; (c) where an Industry Member acquires another Industry Member prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), the date an account was established at the relevant Industry Member, either directly or via transfer; (d) where there are multiple dates associated with an account established prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), the earliest available date; (e) with regard to Industry Member proprietary accounts established prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), (i) the date established for the account in the Industry Member or in a system of the Industry Member or (ii) the date when proprietary trading began in the account (i.e., the date on which the first orders were submitted from the account). With regard to paragraphs (b) – (e), the Account Effective Date will be no later than the date trading occurs at the Industry Member or in the Industry Member's system.

"Advisory Committee" has the meaning set forth in Section 4.13(a).

"Affiliate" of a Person means any Person controlling, controlled by, or under common control with such Person.

"Affiliated Participant" means any Participant controlling, controlled by, or under common control with another Participant.

"Agreement" has the meaning set forth in the preamble to this Agreement.

"Allocation Report" means a report made to the Central Repository by an Industry Member that identifies the Firm Designated ID for any account(s), including subaccount(s), to which executed shares are allocated and provides the security that has been allocated, the identifier of the firm reporting the allocation, the price per share of shares allocated, the side of shares allocated, the number of shares allocated to each account, and the time of the allocation; provided, for the avoidance of doubt, any such Allocation Report shall not be required to be linked to particular orders or executions.

"Bid" means a proposal submitted by a Bidder in response to the RFP or subsequent request for proposal (or similar request).

"Bidder" means any entity, or any combination of separate entities, submitting a Bid.

"Bidding Participant" means a Participant that: (a) submits a Bid; (b) is an Affiliate of an entity that submits a Bid; or (c) is included, or is an Affiliate of an entity that is included, as a Material Subcontractor as part of a Bid.

"Business Clock" means a clock used to record the date and time of any Reportable Event required to be reported under SEC Rule 613.

"Capital Account" has the meaning set forth in Section 7.1(a).

"CAT" means the consolidated audit trail contemplated by SEC Rule 613.

"CAT Data" means data derived from Participant Data, Industry Member Data, SIP Data, and such other data as the Operating Committee may designate as "CAT Data" from time to time.

"CAT NMS Plan" means the plan set forth in this Agreement, as amended from time to time.

"CAT-Order-ID" has the same meaning provided in SEC Rule 613(j)(1).

"CAT Reporter" means each national securities exchange, national securities association and Industry Member that is required to record and report information to the Central Repository pursuant to SEC Rule 613(c).

"CAT-Reporter-ID" has the same meaning provided in SEC Rule 613(j)(2).

"CAT System" means all data processing equipment, communications facilities, and other facilities, including equipment, utilized by the Company or any third parties acting on the Company's behalf in connection with operation of the CAT and any related information or relevant systems pursuant to this Agreement.

"Central Repository" means the repository responsible for the receipt, consolidation, and retention of all information reported to the CAT pursuant to SEC Rule 613 and this Agreement.

"Certificate" has the meaning set forth in Section 2.2.

"Chair" has the meaning set forth in Section 4.2(b).

"Chief Compliance Officer" means the individual then serving (even on a temporary basis) as the Chief Compliance Officer pursuant to Section 4.6, Section 6.1(b), and Section 6.2(a).

"Chief Information Security Officer" means the individual then serving (even on a temporary basis) as the Chief Information Security Officer pursuant to Section 4.6, Section 6.1(b), and Section 6.2(b).

"Code" means the Internal Revenue Code of 1986.

"Company" has the meaning set forth in the preamble to this Agreement.

"Company Interest" means any membership interest in the Company at any particular time, including the right to any and all benefits to which a Participant may be entitled under this Agreement and the Delaware Act, together with the obligations of such Participant to comply with this Agreement.

"Commission" or "SEC" means the United States Securities and Exchange Commission.

"Compliance Rule" means, with respect to a Participant, the rule(s) promulgated by such Participant as contemplated by Section 3.11.

"Compliance Subcommittee" has the meaning set forth in Section 4.12(b).

"Compliance Threshold" has the meaning set forth in Appendix C.

"Conflict of Interest" means that the interest of a Participant (e.g., commercial, reputational, regulatory or otherwise) in the matter that is subject to a vote: (a) interferes, or would be reasonably likely to interfere, with that Participant's objective consideration of the matter; or (b) is, or would be reasonably likely to be, inconsistent with the purpose and objectives of the Company and the CAT, taking into account all relevant considerations including whether a Participant that may otherwise have a conflict of interest has established appropriate safeguards to eliminate such conflict of interest and taking into account the other guiding principles set forth in this Agreement. If a Participant has a "Conflict of Interest" in a particular matter, then each of its Affiliated Participants shall be deemed to have a "Conflict of Interest" in such matter. A "Conflict of Interest" with respect to a Participant includes the situations set forth in Sections 4.3(b)(iv), 4.3(d)(i) and 4.3(d)(ii).

"Customer" has the same meaning provided in SEC Rule 613(j)(3).

"Customer Account Information" shall include, but not be limited to, account number , account type, customer type, date account opened, and large trader identifier (if applicable); except, however, that (a) in those circumstances in which an Industry Member has established a trading relationship with an institution but has not established an account with that institution, the Industry Member will (i) provide the Account Effective Date in lieu of the "date account opened"; (ii) provide the relationship identifier in lieu of the "account number"; and (iii) identify the "account type" as a "relationship"; (b) in those circumstances in which the relevant account was established prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter (as set forth in Rule 613(a)(3)(v) and (vi)), and no "date account opened" is available for the account, the Industry Member will provide the Account Effective Date in the following circumstances: (i) where an Industry Member changes back office providers or clearing firms and the date account opened is changed to the date the account was opened on the new back office/clearing firm system; (ii) where an Industry Member acquires another Industry Member and the date account opened is changed to the date the account was opened on the post-merger back office/clearing firm system; (iii) where there are multiple dates associated with an account in an Industry Member's system, and the parameters of each date are determined by the individual Industry Member; and (iv) where the relevant account is an Industry Member proprietary account.

"Customer-ID" has the same meaning provided in SEC Rule 613(j)(5).

"Customer Identifying Information" means information of sufficient detail to identify a Customer, including, but not limited to, (a) with respect to individuals: name, address, date of birth, individual tax payer identification number ("ITIN")/social security number ("SSN"), individual's role in the account (*e.g.*, primary holder, joint holder, guardian, trustee, person with the power of attorney); and (b) with respect to legal entities: name, address, Employer Identification Number ("EIN")/Legal Entity Identifier ("LEI") or other comparable common entity identifier, if applicable; provided, however, where the LEI or other common entity identifier is provided, information covered by such common entity identifier (*e.g.*, name, address) would not need to be separately submitted to the Central Repository.

"Delaware Act" means the Delaware Limited Liability Company Act.

"Disclosing Party" has the meaning set forth in Section 9.6(a).

"Effective Date" means the date of approval of this Agreement by the Commission.

"Eligible Security" includes (a) all NMS Securities and (b) all OTC Equity Securities.

"Error Rate" has the meaning provided in SEC Rule 613(j)(6).

"Exchange Act" means the Securities Exchange Act of 1934.

"Execution Venue" means a Participant or an alternative trading system ("ATS") (as defined in Rule 300 of Regulation ATS) that operates pursuant to Rule 301 of Regulation ATS (excluding any such ATS that does not execute orders).

"Exemptive Request Letters" has the meaning set forth in Recital C.

"FINRA" means Financial Industry Regulatory Authority, Inc.

"Firm Designated ID" means a unique identifier for each trading account designated by Industry Members for purposes of providing data to the Central Repository, where each such identifier is unique among all identifiers from any given Industry Member for each business date.

"Fiscal Year" means the fiscal year of the Company determined pursuant to Section 9.2(a).

"FS-ISAC" has the meaning set forth in Section 6.2(b)(vi).

"GAAP" means United States generally accepted accounting principles.

"Independent Auditor" has the meaning set forth in Section 6.2(a)(v)(B).

"Industry Member" means a member of a national securities exchange or a member of a national securities association.

"Industry Member Data" has the meaning set forth in Section 6.4(d)(ii).

"Information" has the meaning set forth in Section 9.6(a).

"Initial Plan Processor" means the first Plan Processor selected by the Operating Committee in accordance with SEC Rule 613, Section 6.1 and the Selection Plan.

"Last Sale Report" means any last sale report reported pursuant to the Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information filed with the SEC pursuant to, and meeting the requirements of, SEC Rule 608.

"Latency" means the delay between input into a system and the outcome based upon that input. In computer networks, latency refers to the delay between a source system sending a packet or message, and the destination system receiving such packet or message.

"Listed Option" or "Option" have the meaning set forth in Rule 600(b)(35) of Regulation NMS.

"Majority Vote" means the affirmative vote of at least a majority of all of the members of the Operating Committee or any Subcommittee, as applicable, authorized to cast a vote with respect to a matter presented for a vote (whether or not such a member is present at any meeting at which a vote is taken) by the Operating Committee or any Subcommittee, as applicable (excluding, for the avoidance of doubt, any member of the Operating Committee or any Subcommittee, as applicable, that is recused or subject to a vote to recuse from such matter pursuant to Section 4.3(d)).

"Manual Order Event" means a non-electronic communication of order-related information for which CAT Reporters must record and report the time of the event.

"Material Amendment" has the meaning set forth in Section 6.9(c).

"Material Contract" means any: (a) contract between the Company and the Plan Processor; (b) contract between the Company and any Officer; (c) contract, or group of related contracts, resulting in a total cost or liability to the Company of more than $900,000; (d) contract between the Company, on the one hand, and a Participant or an Affiliate of a Participant, on the other; (e) contract containing other than reasonable arms-length terms; (f) contract imposing, or purporting to impose, non-customary restrictions (including non-competition, non-solicitation or confidentiality (other than customary confidentiality agreements entered into in the ordinary course of business that do not restrict, or purport to restrict, any Participant or any Affiliate of any Participant)) or obligations (including indemnity, most-favored nation requirements, exclusivity, or guaranteed minimum purchase commitments) on the Company or any Participant or any Affiliate of a Participant; (g) contract containing terms that would reasonably be expected to unduly interfere with or negatively impact the ability of the Company, any Participant or any Affiliate of any Participant to perform its regulatory functions (including disciplinary matters), to carry out its responsibilities under the Exchange Act or to perform its obligations under this Agreement; (h) contract providing for a term longer than twelve (12) months or the termination of which would reasonably be expected to materially and adversely affect the Company, any Participant or any Affiliate of a Participant; (i) contract for indebtedness, the disposition or acquisition of assets or equity, or the lease or license of assets or properties; or (j) joint venture or similar contract for cost or profit sharing.

"Material Subcontractor" means any entity that is known to the Participant to be included as part of a Bid as a vendor, subcontractor, service provider, or in any other similar capacity and, excluding products or services offered by the Participant to one or more Bidders on terms subject to a fee filing approved by the SEC: (a) is anticipated to derive 5% or more of its annual revenue in any given year from services provided in such capacity; or (b) accounts for 5% or more of the total estimated annual cost of the Bid for any given year. An entity shall not be considered a "Material Subcontractor" solely due to the entity providing services associated with any of the entity's regulatory functions as a self-regulatory organization registered with the SEC.

"Material Systems Change" means any change or update to the CAT System made by the Plan Processor which will cause a significant change to the functionality of the Central Repository.

"Material Terms of the Order" includes: the NMS Security or OTC Equity Security symbol; security type; price (if applicable); size (displayed and non-displayed); side (buy/sell); order type; if a sell order, whether the order is long, short, short exempt; open/close indicator; time in force (if applicable); if the order is for a Listed Option, option type (put/call), option symbol or root symbol, underlying symbol, strike price, expiration date, and open/close; and any special handling instructions.

"National Best Bid" and "National Best Offer" have the same meaning provided in SEC Rule 600(b)(42).

"NMS Plan" has the same meaning as "National Market System Plan" provided in SEC Rule 613(a)(1) and SEC Rule 600(b)(43).

"NMS Security" means any security or class of securities for which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan, or an effective national market system plan for reporting transactions in Listed Options.

"Non-SRO Bid" means a Bid that does not include a Bidding Participant.

"Officer" means an officer of the Company, in his or her capacity as such, as set forth in Section 4.6.

"Operating Committee" means the governing body of the Company designated as such and described in Article IV.

"Options Exchange" means a registered national securities exchange or automated trading facility of a registered securities association that trades Listed Options.

"Options Market Maker" means a broker-dealer registered with an exchange for the purpose of making markets in options contracts traded on the exchange.

"Order" or "order" has, with respect to Eligible Securities, the meaning set forth in SEC Rule 613(j)(8).

"OTC Equity Security" means any equity security, other than an NMS Security, subject to prompt last sale reporting rules of a registered national securities association and reported to one of such association's equity trade reporting facilities.

"Other SLAs" has the meaning set forth in Section 6.1(h).

"Participant" means each Person identified as such on Exhibit A hereto, and any Person that becomes a Participant as permitted by this Agreement, in such Person's capacity as a Participant in the Company (it being understood that the Participants shall comprise the "members" of the Company (as the term "member" is defined in Section 18-101(11) of the Delaware Act)).

"Participant Data" has the meaning set forth in Section 6.3(d).

"Participation Fee" has the meaning set forth in Section 3.3(a).

"Payment Date" has the meaning set forth in Section 3.7(b).

"Permitted Legal Basis" means the Participant has become exempt from, or otherwise has ceased to be subject to, SEC Rule 613 or has arranged to comply with SEC Rule 613 in some manner other than through participation in this Agreement, in each instance subject to the approval of the Commission.

"Permitted Person" has the meaning set forth in Section 4.9.

"Permitted Transferee" has the meaning set forth in Section 3.4(c).

"Person" means any individual, partnership, limited liability company, corporation, joint venture, trust, business trust, cooperative or association and any heirs, executors, administrators, legal representatives, successors and assigns of such Person where the context so permits.

"PII" means personally identifiable information, including a social security number or tax identifier number or similar information.

"Plan Processor" means the Initial Plan Processor or any other Person selected by the Operating Committee pursuant to SEC Rule 613 and Sections 4.3(b)(i) and 6.1, and with regard to the Initial Plan Processor, the Selection Plan, to perform the CAT processing functions required by SEC Rule 613 and set forth in this Agreement.

"Pledge" and any grammatical variation thereof means, with respect to an interest, asset, or right, any pledge, security interest, hypothecation, deed of trust, lien or other similar encumbrance granted with respect to the affected interest, asset or right to secure payment or performance of an obligation.

"Primary Market Transaction" means any transaction other than a secondary market transaction and refers to any transaction where a Person purchases securities in an offering.

"Prime Rate" means the prime rate published in The Wall Street Journal (or any successor publication) on the last day of each month (or, if not a publication day, the prime rate last published prior to such last day).

"Proceeding" has the meaning set forth in Section 4.8(b).

"Qualified Bid" means a Bid that is deemed by the Selection Committee to include sufficient information regarding the Bidder's ability to provide the necessary capabilities to create, implement, and maintain the CAT so that such Bid can be effectively evaluated by the Selection Committee. When evaluating whether a Bid is a Qualified Bid, each member of the Selection Committee shall consider whether the Bid adequately addresses the evaluation factors set forth in the RFP, and apply such weighting and priority to the factors as such member of the Selection Committee deems appropriate in his or her professional judgment. The determination of whether a Bid is a Qualified Bid shall be determined pursuant to the process set forth in Section 5.2.

"Qualified Bidder" means a Bidder that has submitted a Qualified Bid.

"Quotation Information" means all bids (as defined under SEC Rule 600(b)(8)), offers (as defined under SEC Rule 600(b)(8)), all bids and offers of OTC Equity Securities, displayed quotation sizes in Eligible Securities, market center identifiers (including, in the case of FINRA, the FINRA member that is registered as a market maker or electronic communications network or otherwise utilizes the facilities of FINRA pursuant to applicable FINRA rules, that entered the quotation), withdrawals and other information pertaining to quotations in Eligible Securities required to be reported to the Plan Processor pursuant to this Agreement and SEC Rule 613.

"Raw Data" means Participant Data and Industry Member Data that has not been through any validation or otherwise checked by the CAT System.

"Received Industry Member Data" has the meaning set forth in Section 6.4(d)(ii).

"Receiving Party" has the meaning set forth in Section 9.6(a).

"Recorded Industry Member Data" has the meaning set forth in Section 6.4(d)(i).

"Registered Person" means any member, principal, executive, registered representative, or other person registered or required to be registered under a Participant's rules.

"Reportable Event" includes, but is not limited to, the original receipt or origination, modification, cancellation, routing, execution (in whole or in part) and allocation of an order, and receipt of a routed order.

"Representatives" has the meaning set forth in Section 9.6(a).

"RFP" means the "Consolidated Audit Trail National Market System Plan Request for Proposal" published by the Participants on February 26, 2013 attached as Appendix A, as amended from time to time.

"Securities Information Processor" or "SIP" has the same meaning provided in Section 3(a)(22)(A) of the Exchange Act.

"Selection Committee" means the committee formed pursuant to Section 5.1.

"Selection Plan" has the meaning set forth in Recital A.

"Shortlisted Bid" means a Bid submitted by a Qualified Bidder and selected as a Shortlisted Bid by the Selection Committee pursuant to Section 5.2(b) and, if applicable, pursuant to Section 5.2(c)(iii).

"Shortlisted Bidder" means a Qualified Bidder that has submitted a Bid selected as a Shortlisted Bid.

"SIP Data" has the meaning set forth in Section 6.5(a)(ii).

"SLA" has the meaning set forth in Section 6.1(h).

"Small Industry Member" means an Industry Member that qualifies as a small broker-dealer as defined in SEC Rule 613.

"SRO" means any self-regulatory organization within the meaning of Section 3(a)(26) of the Exchange Act.

"SRO-Assigned Market Participant Identifier" means an identifier assigned to an Industry Member by an SRO or an identifier used by a Participant.

"Subcommittee" has the meaning set forth in Section 4.12(a).

"Supermajority Vote" means the affirmative vote of at least two-thirds of all of the members of the Operating Committee or any Subcommittee, as applicable, authorized to cast a vote with respect to a matter presented for a vote (whether or not such a member is present at any meeting at which a vote is taken) by the Operating Committee or any Subcommittee, as applicable (excluding, for the avoidance of doubt, any member of the Operating Committee or any Subcommittee, as applicable, that is recused or subject to a vote to recuse from such matter pursuant to Section 4.3(d)); provided that if two-thirds of all of such members authorized to cast a vote is not a whole number then that number shall be rounded up to the nearest whole number.

"Tax Matters Partner" has the meaning set forth in Section 9.5(a).

"Transfer" and any grammatical variation thereof means any sale, exchange, issuance, redemption, assignment, distribution or other transfer, disposition or alienation in any way (whether voluntarily, involuntarily or by operation of law). Transfer shall specifically include any: (a) assignment or distribution resulting from bankruptcy, liquidation, or dissolution; or (b) Pledge.

"Technical Specifications" has the meaning set forth in Section 6.9(a).

"Trading Day" shall have such meaning as is determined by the Operating Committee. For the avoidance of doubt, the Operating Committee may establish different Trading Days for NMS Stocks (as defined in SEC Rule 600(b)(47), Listed Options, OTC Equity Securities, and any other securities that are included as Eligible Securities from time to time.

"Voting Senior Officer" has the meaning set forth in Section 5.1(a).

Section 1.2. Principles of Interpretation. In this Agreement (including, for the avoidance of doubt, the Exhibits, Appendices, Attachments, Recitals and Schedules identified in this Agreement), unless the context otherwise requires:

(a) words denoting the singular include the plural and vice versa;

(b) words denoting a gender include all genders;

(c) all exhibits, appendices, attachments, recitals, and schedules to the document in which the reference thereto is contained shall, unless the context otherwise requires, constitute an integral part of such document for all purposes;

(d) a reference to a particular clause, section, article, exhibit, appendix, attachment, recital, or schedule shall be a reference to a clause, section or article of, or an exhibit, appendix, attachment, recital, or schedule to, this Agreement;

(e) a reference to any statute, regulation, amendment, ordinance or law includes all statutes, regulations, proclamations, amendments or laws varying, consolidating or replacing the same from time to time, and a reference to a statute includes all regulations, policies, protocols, codes, proclamations, interpretations and ordinances issued or otherwise applicable under that statute unless, in any such case, otherwise expressly provided in any such statute or in the document in which the reference is contained;

(f) a reference to a "SEC Rule" refers to the correspondingly numbered Rule promulgated under the Exchange Act;

(g) a definition of or reference to any document, instrument or agreement includes an amendment or supplement to, or restatement, replacement, modification or novation of, any such document, instrument or agreement unless otherwise specified in such definition or in the context in which such reference is used;

(h) a reference to any Person includes such Person's permitted successors and assigns in that designated capacity;

(i) a reference to "$", "Dollars" or "US $" refers to currency of the United States of America;

(j) unless otherwise expressly provided in this Agreement, wherever the consent of any Person is required or permitted herein, such consent may be withheld in such Person's sole and absolute discretion;

(k) words such as "hereunder", "hereto", "hereof" and "herein" and other words of similar import shall refer to the whole of the applicable document and not to any particular article, section, subsection or clause thereof; and

(l) a reference to "including" (and grammatical variations thereof) means "including without limitation" (and grammatical variations thereof).

ARTICLE II

EFFECTIVENESS OF AGREEMENT; ORGANIZATION

Section 2.1. **Effectiveness**. This Agreement shall become effective upon approval by the Commission and execution by all Participants identified on Exhibit A and shall continue until terminated. Notwithstanding any provision in this Agreement to the contrary and without the consent of any Person being required, the Company's execution, delivery and performance of this Agreement are hereby authorized, approved and ratified in all respects.

Section 2.2. **Formation**. The Company was formed as a limited liability company under the Delaware Act by filing a certificate of formation (the "Certificate") with the Delaware Secretary of State.

Section 2.3. **Name**. The name of the Company is "CAT NMS, LLC." The name of the Company may be changed at any time or from time to time with the approval of the Operating Committee. All Company business shall be conducted in that name or such other names that comply with applicable law as the Operating Committee may select from time to time.

Section 2.4. **Registered Office; Registered Agent; Principal Office; Other Offices**. The registered office of the Company required by the Delaware Act to be maintained in the State of Delaware shall be the office of the initial registered agent named in the Certificate or such other office (which need not be a place of business of the Company) as the Operating Committee may designate from time to time in the manner provided by law. The registered agent of the Company in the State of Delaware shall be the initial registered agent named in the Certificate or such other Person or Persons as the Operating Committee may designate from time to time in the manner provided by law. The principal office of the Company shall be at such place as the Operating Committee may designate from time to time, which need not be in the State of Delaware. The Company may have such other offices as the Operating Committee may designate from time to time.

Section 2.5. **Certain Filings**. The Company shall cause to be filed such certificates and documents as may be necessary or appropriate to comply with the Delaware Act and any other applicable requirements for the organization, continuation and operation of a limited liability company in accordance with the laws of the State of Delaware and any other jurisdiction in which the Company shall conduct business, and shall continue to do so for so long as the Company conducts business therein. Each member of the Operating Committee is hereby designated as an "authorized person" within the meaning of the Delaware Act.

Section 2.6. **Purposes and Powers**. The Company may engage in: (a) the creation, implementation, and maintenance of the CAT pursuant to SEC Rule 608 and SEC Rule 613; and

(b) any other business or activity that now or hereafter may be necessary, incidental, proper, advisable or convenient to accomplish the foregoing purpose and that is not prohibited by the Delaware Act, the Exchange Act or other applicable law. The Company shall have and exercise all of the powers and rights conferred upon limited liability companies formed pursuant to the Delaware Act.

Section 2.7. **Term.** The term of the Company commenced on the date the Certificate was filed with the office of the Secretary of State of Delaware, and shall be perpetual unless dissolved as provided in this Agreement.

ARTICLE III

PARTICIPATION

Section 3.1. **Participants.** The name and address of each Participant are set forth on Exhibit A. New Participants may only be admitted to the Company in accordance with Section 3.5. No Participant shall have the right or power to resign or withdraw from the Company, except: (a) upon a Transfer of record ownership of all of such Participant's Company Interest in compliance with, and subject to, the provisions of Section 3.4; or (b) as permitted by Section 3.6. No Participant may be expelled or required to resign or withdraw from the Company except upon a Transfer of record ownership of all of such Participant's Company Interest in compliance with, and subject to, the provisions of Section 3.4, or as provided by Section 3.7(a)(ii) or Section 3.7(a)(iii).

Section 3.2. **Company Interests Generally.**

(a) All Company Interests shall have the same rights, powers, preferences and privileges, and shall be subject to the same restrictions, qualifications and limitations. Additional Company Interests may be issued only as permitted by Section 3.3.

(b) Without limiting Section 3.2(a), each Participant shall be entitled to: (i) one vote on any matter presented to the Participants for their consideration at any meeting of the Participants (or by written action of the Participants in lieu of a meeting); and (ii) participate equally in any distribution made by the Company (other than a distribution made pursuant to Section 10.2, which shall be distributed as provided therein).

(c) Company Interests shall not be evidenced by certificates.

(d) Each Participant shall have an equal Company Interest as each other Participant.

Section 3.3. **New Participants.**

(a) Any Person approved by the Commission as a national securities exchange or national securities association under the Exchange Act after the Effective Date may become a Participant by submitting to the Company a completed application in the form provided by the Company. As a condition to admission as a Participant, said Person shall: (i) execute a counterpart of this Agreement, at which time Exhibit A shall be amended to reflect the status of said Person as a Participant (including said Person's address for purposes of notices delivered pursuant to this Agreement); and (ii) pay a fee to the Company in an amount determined by a Majority Vote of the Operating Committee as fairly and reasonably compensating the Company and the Participants for costs incurred in creating, implementing, and maintaining the CAT, including such costs incurred in evaluating and selecting the Initial Plan Processor and any subsequent Plan Processor and for costs the Company incurs in providing for the prospective Participant's participation in the Company, including after consideration of the factors identified in Section 3.3(b) (the "Participation Fee"). The amendment to this Agreement reflecting the admission of a new Participant shall be effective only when: (x) it is approved by the Commission in accordance with SEC Rule 608 or otherwise becomes effective pursuant to SEC Rule 608; and (y) the prospective Participant pays the Participation Fee. Neither a prospective Participant nor any Affiliate of such prospective Participant that is already a Participant shall vote on the determination of the amount of the Participation Fee to be paid by such prospective Participant. Participation Fees paid to the Company shall be added to the general revenues of the Company and shall be allocated as provided in Article VIII.

(b) In determining the amount of the Participation Fee to be paid by any prospective Participant, the Operating Committee shall consider the following factors:

(i) the portion of costs previously paid by the Company for the development, expansion and maintenance of the CAT which, under GAAP, would have been treated as capital expenditures and would have been amortized over the five (5) years preceding the admission of the prospective Participant;

(ii) an assessment of costs incurred and to be incurred by the Company for modifying the CAT or any part thereof to accommodate the prospective Participant, which are not otherwise required to be paid or reimbursed by the prospective Participant;

(iii) Participation Fees paid by other Participants admitted as such after the Effective Date;

(iv) elapsed time from the Effective Date to the anticipated date of admittance of the prospective Participant; and

(v) such other factors, if any, as may be determined to be appropriate by the Operating Committee and approved by the Commission.

In the event the Company (following the vote of the Operating Committee contemplated by Section 3.3(a)) and a prospective Participant do not agree on the amount of the Participation Fee, such amount shall be subject to review by the Commission pursuant to § 11A(b)(5) of the Exchange Act.

(c) An applicant for participation in the Company may apply for limited access to the CAT System for planning and testing purposes pending its admission as a Participant by submitting to the Company a completed Application for Limited Access to the CAT System in a form provided by the Company, accompanied by payment of a deposit in the amount established by the Company, which shall be applied or refunded as described in such application. To be eligible to apply for such limited access, the applicant must have been approved by the SEC as a national securities exchange or national securities association under the Exchange Act but the applicant has not yet become a Participant, or the SEC must have published such applicant's Form 1 application or Form X-15AA-1 application to become a national securities exchange or a national securities association, respectively.

Section 3.4. Transfer of Company Interest.

(a) No Participant may Transfer any Company Interest except in compliance with this Section 3.4. Any Transfer or attempted Transfer in contravention of the foregoing sentence or any other provision of this Agreement shall be null and void *ab initio* and ineffective to Transfer any Company Interest and shall not bind or be recognized by or on the books of the Company, and any transferee in such transaction shall not, to the maximum extent permitted by applicable law, be or be treated as or deemed to be a Participant (or an assignee within the meaning of § 18-702 of the Delaware Act) for any purpose.

(b) No Participant may Transfer any Company Interest except to a national securities exchange or national securities association that succeeds to the business of such Participant as a result of a merger or consolidation with such Participant or the Transfer of all or substantially all of the assets or equity of such Participant.

(c) Notwithstanding anything to the contrary contained in this Agreement, no Participant may Transfer any Company Interest to any transferee as permitted by Section 3.4(b) (a "Permitted Transferee") unless: (i) such Permitted Transferee executes a counterpart of this Agreement, at which time Exhibit A shall be amended to reflect the status of said Permitted Transferee as a Participant (including said Permitted Transferee's address for purposes of notices delivered pursuant to this Agreement); and (ii) the amendment to this Agreement reflecting the Transfer of a Company Interest to a Permitted Transferee is approved by the Commission in accordance with SEC Rule 608 or otherwise becomes effective pursuant to SEC Rule 608. Subject to compliance with this Section 3.4, such amendment and such Transfer shall be effective only when it is approved by the SEC in accordance with SEC Rule 608 or otherwise becomes effective pursuant to SEC Rule 608, as applicable.

(d) The Company shall not be required to recognize any Transfer of any Company Interest until the instrument conveying such Company Interest, in form and substance satisfactory to the Company, has been delivered to the Company at its principal office for recordation on the books of the Company and the transferring Participant or Permitted Transferee has paid all costs and expenses of the Company in connection with such Transfer. The Company shall be entitled to treat the record owner of any Company Interest as the absolute owner thereof in all respects, and neither the Company nor any Participant shall incur liability for distributions of cash or other property made in good faith to such owner until such time as the instrument conveying such Company Interest, in form and substance satisfactory to the Company, has been received and accepted by the Company and recorded on the books of the Company.

(e) Notwithstanding anything to the contrary contained in this Agreement, without prior approval thereof by the Operating Committee, no Transfer of any Company Interest shall be made if the Company is advised by its counsel that such Transfer: (i) may not be effected without registration under the Securities Act of 1933; (ii) would result in the violation of any applicable state securities laws; (iii) would require the Company to register as an investment company under the Investment Company Act of 1940 or modify the exemption from such registration upon which the Company has chosen to rely; (iv) would require the Company to register as an investment adviser under state or federal securities laws; or (v) if the Company is taxed as a partnership for U.S. federal income tax purposes, (A) would result in a termination of the Company under § 708 of the Code, or (B) would result in the treatment of the Company as an association taxable as a corporation or as a "publicly-traded limited partnership" for tax purposes.

Section 3.5. **Admission of New Participants.** Any Person acquiring a Company Interest pursuant to Section 3.3, or any Permitted Transferee acquiring a Participant's Company Interest pursuant to Section 3.4, shall, unless such acquiring Permitted Transferee is a Participant as of immediately prior to such acquisition, be deemed to have been admitted to the Company as a Participant, automatically and with no further action being necessary by the Operating Committee, the Participants or any other Person, by virtue of, and upon the consummation of, such acquisition of a Company Interest and compliance with Section 3.3 or Section 3.4, as applicable.

Section 3.6. **Voluntary Resignation from Participation.** Any Participant may voluntarily resign from the Company, and thereby withdraw from and terminate its right to any Company Interest, only if (a) a Permitted Legal Basis for such action exists and (b) such Participant provides to the Company and each other Participant no less than thirty (30) days prior to the effective date of such action written notice specifying such Permitted Legal Basis, including appropriate documentation evidencing the existence of such Permitted Legal Basis, and, to the extent applicable, evidence reasonably satisfactory to the Company and other Participants that any orders or approvals required from the Commission in connection with such action have been obtained. A validly withdrawing Participant shall have the rights and obligations provided in Section 3.7.

Section 3.7. **Termination of Participation.**

(a) The participation in the Company of a Participant, and its right to any Company Interest, shall terminate as of the earliest of: (i) the effective date specified in a valid notice delivered pursuant to Section 3.6 (which date, for the avoidance of doubt, shall be no earlier than the date that is thirty (30) days after the delivery of such notice); (ii) such time as such Participant is no longer registered as a national securities exchange or national securities association; or (iii) the date of termination pursuant to Section 3.7(b).

(b) Each Participant shall pay all fees or other amounts required to be paid under this Agreement within thirty (30) days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated) (the "Payment Date"). If a Participant fails to make such a required payment by the Payment Date, any balance in the Participant's Capital Account shall be applied to the outstanding balance. If a balance still remains with respect to any such required payment, the Participant shall pay interest on the outstanding balance from the Payment Date until such fee or amount is paid at a per annum rate equal to the lesser of: (i) the Prime Rate plus 300 basis points; or (ii) the maximum rate permitted by applicable law. If any such remaining outstanding balance is not paid within thirty (30) days after the Payment Date, the Participants shall file an amendment to this Agreement requesting the termination of the participation in the Company of such Participant, and its right to any Company

Interest, with the SEC. Such amendment shall be effective only when it is approved by the SEC in accordance with SEC Rule 608 or otherwise becomes effective pursuant to SEC Rule 608.

(c) In the event a Participant becomes subject to one or more of the events of bankruptcy enumerated in § 18-304 of the Delaware Act, that event by itself shall not cause the termination of the participation in the Company of the Participant so long as the Participant continues to be registered as a national securities exchange or national securities association. From and after the effective date of termination of a Participant's participation in the Company, profits and losses of the Company shall cease to be allocated to the Capital Account of the Participant in accordance with Article VIII below. A terminated Participant shall be entitled to receive the balance in its Capital Account as of the effective date of termination adjusted for profits and losses through that date, payable within ninety (90) days of the effective date of termination, and shall remain liable for its proportionate share of costs and expenses allocated to it pursuant to Article VIII for the period during which it was a Participant, for obligations under Section 3.8(c), for its indemnification obligations pursuant to Section 4.1, and for obligations under Section 9.6, but it shall have no other obligations under this Agreement following the effective date of termination. This Agreement shall be amended to reflect any termination of participation in the Company of a Participant pursuant to this Section 3.7; provided that such amendment shall be effective only when it is approved by the Commission in accordance with SEC Rule 608 or otherwise becomes effective pursuant to SEC Rule 608.

Section 3.8. Obligations and Liability of Participants.

(a) Except as may be determined by the unanimous vote of all the Participants or as may be required by applicable law, no Participant shall be obligated to contribute capital or make loans to the Company, and the opening balance in the Capital Account of each Participant that is established in accordance with Section 7.1(a) shall be zero. No Participant shall have the right to withdraw or to be repaid any capital contributed by it or to receive any other payment in respect of any Company Interest, including as a result of the withdrawal or resignation of such Participant from the Company, except as specifically provided in this Agreement.

(b) Except as provided in this Agreement and except as otherwise required by applicable law, no Participant shall have any personal liability whatsoever in its capacity as a Participant, whether to the Company, to any Participant or any Affiliate of any Participant, to the creditors of the Company or to any other Person, for the debts, liabilities, commitments or any other obligations of the Company or for any losses of the Company. Without limiting the foregoing, the failure of the Company to observe any formalities or requirements relating to exercise of its powers or management of its business or affairs under this Agreement or the Delaware Act shall not be grounds for imposing personal liability on any Participant or any Affiliate of a Participant for any liability of the Company.

(c) In accordance with the Delaware Act, a member of a limited liability company may, under certain circumstances, be required to return amounts previously distributed to such member. It is the intent of the Participants that no distribution to any Participant pursuant to Article VIII shall be deemed a return of money or other property paid or distributed in violation of the Delaware Act. The payment of any such money or distribution of any such property to a Participant shall be deemed to be a compromise within the meaning of the Delaware Act, and the

Participant receiving any such money or property shall not be required to return any such money or property to any Person. However, if any court of competent jurisdiction holds that, notwithstanding the provisions of this Agreement, any Participant is obligated to make any such payment, such obligation shall be the obligation of such Participant and not of the Operating Committee, the Company or any other Participant.

(d) A negative balance in a Participant's Capital Account, in and of itself, shall not require such Participant to make any payment to the Company or any other Participant.

Section 3.9. **Loans**. If the Company requires additional funds to carry out its purposes, to conduct its business, to meet its obligations, or to make any expenditure authorized by this Agreement, the Company may borrow funds from such one or more of the Participants, or from such third party lender(s), and on such terms and conditions, as may be approved by a Supermajority Vote of the Operating Committee.

Section 3.10. **No Partnership**. The Company is not intended to be a general partnership, limited partnership or joint venture for any purpose, and no Participant shall be considered to be a partner or joint venturer of any other Participant, for any purpose, and this Agreement shall not be construed to suggest otherwise.

Section 3.11. **Compliance Undertaking**. Each Participant shall comply with and enforce compliance, as required by SEC Rule 608(c), by its Industry Members with the provisions of SEC Rule 613 and of this Agreement, as applicable, to the Participant and its Industry Members. The Participants shall endeavor to promulgate consistent rules (after taking into account circumstances and considerations that may impact Participants differently) requiring compliance by their respective Industry Members with the provisions of SEC Rule 613 and this Agreement.

ARTICLE IV

MANAGEMENT OF THE COMPANY

Section 4.1. **Operating Committee**. Except for situations in which the approval of the Participants is required by this Agreement or by non-waivable provisions of applicable law, the Company shall be managed by the Operating Committee, which shall have general charge and supervision of the business of the Company and shall be constituted as provided in Section 4.2. The Operating Committee: (a) acting collectively in accordance with this Agreement, shall be the sole "manager" of the Company within the meaning of § 18-101(10) of the Delaware Act (and no individual member of the Operating Committee shall (i) be a "manager" of the Company within the meaning of Section 18-101(10) of the Delaware Act or (ii) have any right, power or authority to act for or on behalf of the Company, to do any act that would be binding on the Company, or to incur any expenditures on behalf of the Company); (b) shall have the right, power and authority to exercise all of the powers of the Company except as otherwise provided by applicable law or this Agreement; and (c) except as otherwise expressly provided herein, shall make all decisions and authorize or otherwise approve all actions taken or to be taken by the Company. Decisions or actions relating to the Company that are made or approved by the Operating Committee, or by any Subcommittee within the scope of authority granted to such Subcommittee in accordance with this Agreement (or, with respect to matters requiring a vote, approval, consent or other action of the

Participants hereunder or pursuant to non-waivable provisions of applicable law, by the Participants) in accordance with this Agreement shall constitute decisions or actions by the Company and shall be binding on the Company and each Participant. Except to the extent otherwise expressly provided to the contrary in this Agreement, no Participant shall have authority to act for, or to assume any obligation or responsibility on behalf of, the Company, without the prior approval of the Operating Committee, and each Participant shall indemnify and hold harmless the Company and each other Participant for any breach of the provisions of this sentence by such breaching Participant. Without limiting the generality of the foregoing, except as otherwise expressly provided in this Agreement, the Operating Committee shall make all policy decisions on behalf of the Company in furtherance of the functions and objectives of the Company under the Exchange Act, any rules thereunder, including SEC Rule 613, and under this Agreement. Notwithstanding anything to the contrary, the Operating Committee may delegate all or part of its administrative functions under this Agreement, but not its policy making (except to the extent determinations are delegated as specifically set forth in this Agreement) authority, to one or more Subcommittees, and any other Person. A Person to which administrative functions are so delegated shall perform the same as agent for the Company, in the name of the Company. Each Person who performs administrative functions on behalf of the Company (including the Plan Processor) shall be required to: (i) agree to be bound by the confidentiality obligations in Section 9.6(a) as a "Receiving Party"; and (ii) agree that any nonpublic business information pertaining to any Participant or any Affiliate of such Participant that becomes known to such Person shall be held in confidence and not shared with the other Participants or any other Person, except for information that may be shared in connection with joint activities permitted under this Agreement.

Section 4.2. Composition and Selection of Operating Committee; Chair.

(a) The Operating Committee shall consist of one voting member representing each Participant and one alternate voting member representing each Participant who shall have a right to vote only in the absence of that Participant's voting member of the Operating Committee. Each of the voting and alternate voting members of the Operating Committee shall be appointed by the Participant that he or she represents, shall serve at the will of the Participant appointing such member and shall be subject to the confidentiality obligations of the Participant that he or she represents as set forth in Section 9.6. One individual may serve as the voting member of the Operating Committee for multiple Affiliated Participants, and such individual shall have the right to vote on behalf of each such Affiliated Participant.

(b) No later than the date the CAT System commences operations, the Operating Committee shall elect, by Majority Vote, one member thereof to act as the initial chair of the Operating Committee (the "Chair"). Such initial Chair, and each successor thereto, shall serve in such capacity for a two (2)-year term or until the earliest of his death, resignation or removal in accordance with the provisions of this Agreement. The Operating Committee shall elect, from the members thereof, a successor to the then serving Chair (which successor, subject to the last sentence of this Section 4.2(b), may be the Person then serving in such capacity) no later than three (3) months prior to the expiration of the then current term of the Person then serving as Chair. The Operating Committee, by Supermajority Vote, may remove the Chair from such position. In the case of any death, removal, resignation, or other vacancy of the Chair, a successor Chair shall be promptly elected by the Operating Committee, by Majority Vote, from among the members thereof who shall serve until the end of the then current term. The Chair shall preside at all meetings of the Operating Committee, shall designate a Person to act as Secretary to record the minutes of each such meeting, and shall perform such other duties and possess such other powers as the Operating Committee may from time to time prescribe. The Chair shall not be entitled to a tie-breaking vote at any meeting of the Operating Committee. Notwithstanding anything in this Agreement to the contrary: (i) no Person shall serve as Chair for more than two successive full terms; and (ii) no Person then appointed to the Operating Committee by a Participant that then serves, or whose Affiliate then serves, as the Plan Processor shall be eligible to serve as the Chair.

Section 4.3. **Action of Operating Committee.**

(a) Except as otherwise provided herein, each of the members of the Operating Committee, including the Chair, shall be authorized to cast one (1) vote for each Participant that he or she represents on all matters voted upon by the Operating Committee, and action of the Operating Committee shall be authorized by Majority Vote, subject to the approval of the SEC whenever such approval is required under applicable provisions of the Exchange Act and the rules of the SEC adopted thereunder. Action of the Operating Committee authorized in accordance with this Agreement shall be without prejudice to the rights of any Participant to present contrary views to any regulatory body or in any other appropriate forum. Without limiting the generality of the foregoing, the Company shall not take any of the following actions unless the Operating Committee, by Majority Vote, authorizes such action:

(i) select the Chair pursuant to Section 4.2(b);

(ii) select the members of the Advisory Committee pursuant to Section 4.13;

(iii) interpret this Agreement (unless otherwise noted herein);

(iv) approve any recommendation by the Chief Compliance Officer pursuant to Section 6.2(a)(v)(A);

(v) determine to hold an Executive Session of the Operating Committee pursuant to Section 4.4(a);

(vi) determine the appropriate funding-related policies, procedures and practices consistent with Article XI; or

(vii) any other matter specified elsewhere in this Agreement (which includes, as stated in the definition of "Agreement," the Appendices to this Agreement) as requiring a vote, approval or other action of the Operating Committee (other than those matters expressly requiring a Supermajority Vote or a different vote of the Operating Committee).

(b) Notwithstanding Section 4.3(a) or anything else to the contrary in this Agreement, the Company shall not take any of the following actions unless such action shall have been authorized by the Supermajority Vote of the Operating Committee, subject to the approval of the SEC whenever such approval is required under applicable provisions of the Exchange Act and the rules of the SEC adopted thereunder:

(i) select a Plan Processor, other than the Initial Plan Processor selected in accordance with Article V;

(ii) terminate a Plan Processor without cause in accordance with Section 6.1(q);

(iii) approve the Plan Processor's appointment or removal of the Chief Information Security Officer, the Chief Compliance Officer, or any Independent Auditor in accordance with Section 6.1(b);

(iv) enter into, modify or terminate any Material Contract (if the Material Contract is with a Participant or an Affiliate of a Participant, such Participant and Affiliated Participant shall be recused from any vote under this Section 4.3(b)(iv));

(v) make any Material Systems Change;

(vi) approve the initial Technical Specifications pursuant to Section 6.9 or any Material Amendment to the Technical Specifications proposed by the Plan Processor in accordance with Section 6.9;

(vii) amend the Technical Specifications on its own motion; or

(viii) any other matter specified elsewhere in this Agreement (which includes, as stated in the definition of "Agreement," the Appendices to this Agreement) as requiring a vote, approval or other action of the Operating Committee by a Supermajority Vote.

(c) Any action required or permitted to be taken at any meeting of the Operating Committee or any Subcommittee may be taken without a meeting, if all of the members of the Operating Committee or Subcommittee, as the case may be, then serving consent to the action in writing or by electronic transmission. Such written consents and hard copies of the electronic transmissions shall be filed with the minutes of proceedings of the Operating Committee or Subcommittee, as applicable.

(d) If a member of the Operating Committee or any Subcommittee determines that voting on a matter under consideration by the Operating Committee or such Subcommittee raises a Conflict of Interest, such member shall recuse himself or herself from voting on such matter. If the members of the Operating Committee or any Subcommittee (excluding the member thereof proposed to be recused) determine by Supermajority Vote that any member voting on a matter under consideration by the Operating Committee or such Subcommittee raises a Conflict of Interest, such member shall be recused from voting on such matter. No member of the Operating Committee or any Subcommittee shall be automatically recused from voting on any matter, except as provided in Section 4.3(b)(iv) or as otherwise specified elsewhere in this Agreement, and except as provided below:

(i) if a Participant is a Bidding Participant whose Bid remains under consideration, members appointed to the Operating Committee or any Subcommittee by such Participant or any of its Affiliated Participants shall be recused from any vote concerning: (A) whether another Bidder may revise its Bid; (B) the selection of a Bidder; or (C) any contract to which such Participant or any of its Affiliates would be a party in its capacity as Plan Processor; and

(ii) if a Participant is (A) then serving as Plan Processor, (B) is an Affiliate of the Person then serving as Plan Processor, or (C) is an Affiliate of an entity that is a Material Subcontractor to the Plan Processor, then in each case members appointed to the Operating Committee or any Subcommittee by such Participant or any of its Affiliated Participants shall be recused from any vote concerning: (1) the proposed removal of such Plan Processor; or (2) any contract between the Company and such Plan Processor.

Section 4.4. Meetings of the Operating Committee.

(a) Meetings of the Operating Committee may be attended by each Participant's voting Representative and its alternate voting Representative and by a maximum of two (2) nonvoting Representatives of each Participant, by members of the Advisory Committee, by the Chief Compliance Officer, by other Representatives of the Company and the Plan Processor, by Representatives of the SEC, and by such other Persons that the Operating Committee may invite to attend; provided that the Operating Committee may, where appropriate, determine to meet in an Executive Session, during which only voting members of the Operating Committee shall be present; provided, that the Operating Committee may invite other Representatives of the Participants, of the Company, of the Plan Processor (including the Chief Compliance Officer and the Chief Information Security Officer), or the SEC, or such other Persons that the Operating Committee may invite to attend, to be present during an Executive Session. Any determination of the Operating Committee to meet in an Executive Session shall be made upon a Majority Vote and shall be reflected in the minutes of the meeting. Regular meetings of the Operating Committee shall be held not less than once each calendar quarter at such times as shall from time to time be determined by the Operating Committee, on not less than ten (10) days' notice. Special meetings of the Operating Committee may be called upon the request of two or more Participants on not less than two (2) days' notice; provided that each Participant, collectively with all of such Participant's Affiliated Participants, shall be deemed a single Participant for purposes of this sentence. Emergency meetings of the Operating Committee may be called upon the request of two (2) or more Participants and may occur as soon as practical after calling for such meeting; provided that each Participant, collectively with all of such Participant's Affiliated Participants, shall be deemed a single Participant for purposes of this sentence. In the case of an emergency meeting of the Operating Committee, in addition to those Persons otherwise entitled to attend such meeting: (i) each Participant shall have the right to designate a reasonable number of its employees or other Representatives with substantial knowledge or expertise relevant to the subject matter of such meeting to attend such meeting; and (ii) each Participant shall use commercially reasonable efforts to designate an employee or other Representative of such Participant with substantial knowledge or expertise relevant to the subject matter of such meeting to attend such meeting; provided, for the avoidance of doubt, that no Person attending any such meeting solely by virtue of this sentence shall have the right to vote on any matter submitted for a vote at any such meeting. The Chair, or in his or her absence, a member of the Operating Committee designated by the Chair or by members of the Operating Committee in attendance, shall preside at each meeting of the Operating Committee, and a Person in attendance designated by the Chair (or the member of the Operating Committee presiding in the Chair's absence) shall act as Secretary to record the minutes thereof. The location of the regular and special meetings of the Operating Committee shall be fixed by the Operating Committee, provided that in general the location of meetings shall be rotated among the locations of the principal offices of the Participants. Members of the Operating Committee may be present at a meeting by conference telephone or other electronic means that enables each of them to hear and be heard by all others present at the meeting. Whenever notice of any meeting of the Operating Committee is required to be given by law or this Agreement, a written waiver, signed by the Person entitled to notice, or a waiver by electronic transmission by the Person entitled to notice, whether before, at or after the time stated in such notice, shall be deemed equivalent to notice. Attendance at a meeting of the Operating Committee by a member thereof shall constitute a waiver of notice of such meeting, except when such member of the Operating Committee attends any such meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(b) Any Person that is not a Participant, but for which the SEC has published a Form 1 Application or Form X-15AA-1 Application to become a national securities exchange or a national securities association, respectively, shall be permitted to appoint one primary Representative and one alternate Representative to attend regularly scheduled Operating Committee meetings in the capacity of a non-voting observer but shall not be permitted to have any Representative attend a special meeting, emergency meeting or meeting held in Executive Session of the Operating Committee. If such Person's Form 1 Application or Form X-15AA-1 Application is withdrawn or returned for any reason, then such Person shall no longer be eligible to be represented in regularly scheduled Operating Committee meetings. The Operating Committee shall have the discretion, in limited instances, to deviate from this policy if it determines, by Majority Vote, that circumstances so warrant.

Section 4.5. **Interpretation of Other Regulations**. Interpretive questions arising during the operation or maintenance of the Central Repository with respect to applicable laws, rules or regulations shall be presented to the Operating Committee, which shall determine whether to seek interpretive guidance from the SEC or other appropriate regulatory body and, if so, in what form.

Section 4.6. Officers of the Company.

(a) Each of the Chief Compliance Officer and the Chief Information Security Officer (each of whom shall be employed solely by the Plan Processor and neither of whom shall be deemed or construed in any way to be an employee of the Company) shall be an Officer with the same respective title, as applicable, as the Chief Compliance Officer of the Company and the Chief Information Security Officer of the Company. Neither such Officer shall receive or be entitled to any compensation from the Company or any Participant by virtue of his or her service in such capacity (other than, if a Participant is then serving as the Plan Processor, compensation paid to such Officer as an employee of such Participant). Each such Officer shall report directly to the Operating Committee. The Chief Compliance Officer shall work on a regular and frequent basis with the Compliance Subcommittee and/or other Subcommittees as may be determined by the Operating Committee. Except to the extent otherwise provided herein, including Section 6.2, each such Officer shall have such fiduciary and other duties with regard to the Plan Processor as imposed by the Plan Processor on such individual by virtue of his or her employment by the Plan Processor.

(b) The Plan Processor shall inform the Operating Committee of the individual who has direct management responsibility for the Plan Processor's performance of its obligations with respect to the CAT. Subject to approval by the Operating Committee of such individual, the Operating Committee shall appoint such individual as an Officer. In addition, the Operating Committee by Supermajority Vote may appoint other Officers as it shall from time to time deem necessary, and may assign any title to any such Officer as it deems appropriate. Any Officer appointed pursuant to this Section 4.6(b) shall have only such duties and responsibilities as set forth in this Agreement or as the Operating Committee shall from time to time expressly determine, but no such Officer shall have any authority to bind the Company (which authority is vested solely in the Operating Committee) or be an employee of the Company, unless in each case the Operating Committee, by Supermajority Vote, expressly determines otherwise. No person subject to a "statutory disqualification" (as defined in Section 3(a)(39) of the Exchange Act) may serve as an Officer. It is the intent of the Participants that the Company have no employees.

Section 4.7. Interpretation of Certain Rights and Duties of Participants, Members of the Operating Committee and Officers. To the fullest extent permitted by the Delaware Act and other applicable law:

(a) the respective obligations of the Participants, Officers, and the members of the Operating Committee, to each other and to the Company are limited to the express obligations set forth in this Agreement;

(b) the Participants hereby expressly acknowledge and agree that each member of the Operating Committee, individually, is serving hereunder solely as, and shall act in all respects hereunder solely as, an agent of the Participant appointing such member of the Operating Committee;

(c) no Participant, Officer, or member of the Operating Committee, in such Person's capacity as such, shall have any fiduciary or similar duties or obligations to the Company or any other Participant, Officer, or member of the Operating Committee, whether express or implied by the Delaware Act or any other law, in each case subject only to the implied contractual covenant of good faith and fair dealing, and each Participant, Officer, and the Company, to the fullest extent permitted by applicable law, waives any claim or cause of action against any Participant, Officer, or member of the Operating Committee that might otherwise arise in respect of any such fiduciary duty or similar duty or obligation; provided, however, that the provisions of this Section 4.7(c) shall have no effect on the terms of any relationship, agreement or arrangement between any member of the Operating Committee and the Participant appointing such member of the Operating Committee or between any Participant (other than solely in its capacity as a Participant) and the Company such as a contract between such Participant and the Company pursuant to which such Participant serves as the Plan Processor or between an Officer and the Plan Processor;

(d) subject to Section 4.7(c), each Participant and each member of the Operating Committee may, with respect to any vote, consent or approval that such Person is entitled to grant or withhold pursuant to this Agreement, grant or withhold such vote, consent or approval in its sole and absolute discretion, with or without cause; and

(e) for the avoidance of doubt, no Participant shall be entitled to appraisal or dissenter rights for any reason with respect to any Company Interest.

Section 4.8. Exculpation and Indemnification.

(a) Except for the indemnification obligations of Participants under Section 4.1, no Participant or member of the Operating Committee shall be liable to the Company or to any Participant for any loss suffered by the Company or by any other Participant unless such loss is caused by: (i) the fraud, gross negligence, willful misconduct or willful violation of law on the part of such Participant or member of the Operating Committee; or (ii) in the case of a Participant, a material breach of this Agreement by such Participant. The provisions of this Section 4.8(a) shall have no effect on the terms of any relationship, agreement or arrangement between any member of the Operating Committee and the Participant appointing such member to the Operating Committee or between any Participant (other than solely in its capacity as a Participant) and the Company such as a contract between such Participant and the Company pursuant to which such Participant serves as the Plan Processor.

(b) Subject to the limitations and conditions as provided in this Section 4.8(b), the Company shall indemnify any Participant and any member of the Operating Committee (and may, upon approval of the Operating Committee, indemnify any employee or agent of the Company) who was or is made a party or is threatened to be made a party to or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, arbitrative (hereinafter a "Proceeding"), or any appeal in such a Proceeding or any inquiry or investigation that could lead to such a Proceeding, by reason of the fact that such Person is or was a Participant, a member of the Operating Committee or any Subcommittee, or an employee or agent of the Company against judgments, penalties (including excise and similar taxes and punitive damages), fines, settlements and reasonable expenses (including attorneys' fees) actually incurred by such Person in connection with such Proceeding, if and only if the Person seeking indemnification is entitled to exculpation pursuant to Section 4.8(a). Indemnification under this Section 4.8(b) shall continue as to a Person who has ceased to serve in the capacity which initially entitled such Person to indemnification hereunder. As a condition precedent to an indemnified Person's right to be indemnified pursuant to this Section 4.8(b), such indemnified Person must notify the Company in writing as soon as practicable of any Proceeding for which such indemnified Person will or could seek indemnification. With respect to any Proceeding of which the Company is so notified, the Company shall be entitled to participate therein at its own expense and/or to assume the defense thereof at its own expense, with legal counsel reasonably acceptable to the indemnified Person. If the Company does not assume the defense of any such Proceeding of which the Company receives notice under this Section 4.8(b), reasonable expenses incurred by an indemnified Person in connection with any such Proceeding shall be paid or reimbursed by the Company in advance of the final disposition of such Proceeding upon receipt by the Company of: (i) written affirmation by the indemnified Person of such Person's good faith belief that such Person has met the standard of conduct necessary for such Person to be entitled to indemnification by the Company (which, in the case of a Person other than a Participant or a member of the Operating Committee, shall be, unless otherwise determined by the Operating Committee, that (A) such Person determined, in good faith, that such conduct was in, or was not opposed to, the best interests of the Company and (B) such conduct did not constitute gross negligence or willful misconduct); and (ii) a written undertaking by such Person to repay such expenses if it shall ultimately be determined by a court of competent jurisdiction that such Person has not met such standard of conduct or is otherwise not entitled to indemnification by the Company. The Company shall not indemnify an indemnified Person to the extent such Person is reimbursed from the proceeds of insurance, and in the event the Company makes any indemnification payments to an indemnified Person and such Person is subsequently reimbursed from the proceeds of insurance, such Person shall promptly refund such indemnification payments to the Company to the extent of such insurance reimbursement. The rights granted pursuant to this Section 4.8(b) shall be deemed contract rights, and no amendment, modification or repeal of this Section 4.8(b) shall have the effect of limiting or denying any such rights with respect to actions taken or Proceedings arising prior to any amendment, modification or repeal. It is expressly acknowledged that the indemnification provided in this Section 4.8(b) could involve indemnification for negligence or under theories of strict liability. For Persons other than Participants or members of the Operating Committee, indemnification shall only be made upon the approval of the Operating Committee. Notwithstanding anything to the contrary in this Section 4.8 or elsewhere in this Agreement, no Person shall be indemnified hereunder for any losses, liabilities or expenses arising from or out of a violation of federal or state securities laws or any other intentional or criminal wrongdoing. Any indemnification under this Section 4.8 shall be paid from, and only to the extent of, Company assets, and no Participant shall have any personal liability on account thereof in the absence of a separate written agreement to the contrary.

Section 4.9. **Freedom of Action**. Each Participant and such Participant's Affiliates, and their respective Representatives (individually, "Permitted Person" and collectively, the "Permitted Persons") may have other business interests and may engage in any business or trade, profession, employment, or activity whatsoever (regardless of whether any such activity competes, directly or indirectly, with the Company's business or activities), for its own account, or in partnership with, or as a Representative of, any other Person. No Permitted Person (other than, if a Participant is then serving as the Plan Processor, any Officer then employed by the Plan Processor) shall be required to devote its entire time (business or otherwise), or any particular portion of its time (business or otherwise) to the business of the Company. Neither the Company nor any Participant nor any Affiliate thereof, by virtue of this Agreement, shall have any rights in and to any such independent venture or the income or profits derived therefrom, regardless of whether or not such venture was initially presented to a Permitted Person as a direct or indirect result of such Permitted Person's relationship with the Company. No Permitted Person shall have any obligation hereunder to present any business opportunity to the Company, even if the opportunity is one that the Company might reasonably have pursued or had the ability or desire to pursue, in each case, if granted the opportunity to do so, and no Permitted Person shall be liable to the Company or any Participant (or any Affiliate thereof) for breach of any fiduciary or other duty relating to the Company (whether imposed by applicable law or otherwise), by reason of the fact that the Permitted Person pursues or acquires such business opportunity, directs such business opportunity to another Person or fails to present such business opportunity, or information regarding such business opportunity, to the Company. Each Participant and the Company, to the fullest extent permitted by applicable law, waives any claim or cause of action against any Permitted Person for breach of any fiduciary duty or other duty (contractual or otherwise) by reason of the fact that the Permitted Person pursues or acquires any opportunity for itself, directs such opportunity to another Person, or does not present such opportunity to the Company. This Section 4.9 shall have no effect on the terms of any relationship, agreement or arrangement between any Participant (other than solely in its capacity as a Participant) and the Company such as a contract between such Participant and the Company pursuant to which such Participant serves as the Plan Processor.

Section 4.10. Arrangements with Participants and Members of the Operating Committee. Subject to the terms of this Agreement, including Section 4.3(b)(iv) and Section 4.3(d), and any limitations imposed on the Company and the Participants under applicable law, rules, or regulations, the Company may engage in business with, or enter into one or more agreements, leases, contracts or other arrangements for the furnishing to or by it of goods, services, technology or space with, any Participant, any member of the Operating Committee or any Affiliate of any Participant or member of the Operating Committee, and may pay compensation in connection with such business, goods, services, technology or space.

Section 4.11. Participant Action Without a Meeting. Any action required or permitted to be taken by Participants pursuant to this Agreement (including pursuant to any provision of this Agreement that requires the consent or approval of Participants) may be taken without a meeting, by unanimous consent in writing, setting forth the action so taken, which consent shall be signed by all Participants entitled to consent.

Section 4.12. Subcommittees.

(a) The Operating Committee may, by Majority Vote, designate by resolution one (1) or more subcommittees (each, a "Subcommittee") it deems necessary or desirable in furtherance of the management of the business and affairs of the Company. For any Subcommittee, any member of the Operating Committee who wants to serve thereon may so serve, and if Affiliated Participants have collectively appointed one member to the Operating Committee to represent them, then such Affiliated Participants may have only that member serve on the Subcommittee or may decide not to have only that collectively appointed member serve on the Subcommittee. Such member may designate an individual other than himself or herself who is also an employee of the Participant or Affiliated Participants that appointed such member to serve on a Subcommittee in lieu of the particular member. Any Subcommittee, to the extent provided in the resolution of the Operating Committee designating it and subject to Section 4.1 and non-waivable provisions of the Delaware Act, shall have and may exercise all the powers and authority of the Operating Committee in the management of the business and affairs of the Company as so specified in the resolution of the Operating Committee. Each Subcommittee shall keep minutes and make such reports as the Operating Committee may from time to time request. Except as the Operating Committee may otherwise determine, any Subcommittee may make rules for the conduct of its business, but unless otherwise provided by the Operating Committee or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in this Agreement for the Operating Committee.

(b) The Operating Committee shall maintain a compliance Subcommittee (the "Compliance Subcommittee"). The Compliance Subcommittee's purpose shall be to aid the Chief Compliance Officer (who shall directly report to the Operating Committee in accordance with Section 6.2(a)(iii)) as necessary, including with respect to issues involving:

(i) the maintenance of the confidentiality of information submitted to the Plan Processor or Central Repository pursuant to SEC Rule 613, applicable law, or this Agreement by Participants and Industry Members;

(ii) the timeliness, accuracy, and completeness of information submitted pursuant to SEC Rule 613, applicable law, or this Agreement by Participants and Industry Members; and

(iii) the manner in and extent to which each Participant is meeting its obligations under SEC Rule 613, Section 3.11, and as set forth elsewhere in this Agreement and ensuring the consistency of this Agreement's enforcement as to all Participants.

Section 4.13. Advisory Committee.

(a) An advisory committee to the Company (the "Advisory Committee") shall be formed and shall function in accordance with SEC Rule 613(b)(7) and this Section 4.13.

(b) No member of the Advisory Committee may be employed by or affiliated with any Participant or any of its Affiliates or facilities. The SEC's Chief Technology Officer (or the individual then currently employed in a comparable position providing equivalent services) shall serve as an observer of the Advisory Committee (but shall not be a member thereof). The Operating Committee shall select one (1) member to serve on the Advisory Committee from representatives of each category identified in Sections 4.13(b)(i) through 4.13(b)(xii) to serve on the Advisory Committee on behalf of himself or herself individually and not on behalf of the entity for which the individual is then currently employed; provided that the members so selected pursuant to Sections 4.13(b)(i) through 4.13(b)(xii) must include, in the aggregate, representatives of no fewer than three (3) broker-dealers that are active in the options business and representatives of no fewer than three (3) broker-dealers that are active in the equities business; and provided further that upon a change in employment of any such member so selected pursuant to Sections 4.13(b)(i) through 4.13(b)(xii) a Majority Vote of the Operating Committee shall be required for such member to be eligible to continue to serve on the Advisory Committee:

(i) a broker-dealer with no more than 150 Registered Persons;

(ii) a broker-dealer with at least 151 and no more than 499 Registered Persons;

(iii) a broker-dealer with 500 or more Registered Persons;

(iv) a broker-dealer with a substantial wholesale customer base;

(v) a broker-dealer that is approved by a national securities exchange (A) to effect transactions on an exchange as a specialist, market maker, or floor broker; or (B) to act as an institutional broker on an exchange;

(vi) a proprietary-trading broker-dealer;

(vii) a clearing firm;

(viii) an individual who maintains a securities account with a registered broker or dealer but who otherwise has no material business relationship with a broker or dealer or with a Participant;

(ix) a member of academia with expertise in the securities industry or any other industry relevant to the operation of the CAT System;

(x) an institutional investor trading on behalf of a public entity or entities;

(xi) an institutional investor trading on behalf of a private entity or entities; and

(xii) an individual with significant and reputable regulatory expertise.

(c) Four of the twelve initial members of the Advisory Committee, as determined by the Operating Committee, shall have an initial term of one (1) year. Four of the twelve initial members of the Advisory Committee, as determined by the Operating Committee, shall have an initial term of two (2) years. All other members of the Advisory Committee shall have a term of three (3) years. No member of the Advisory Committee may serve thereon for more than two consecutive terms.

(d) The Advisory Committee shall advise the Participants on the implementation, operation, and administration of the Central Repository, including possible expansion of the Central Repository to other securities and other types of transactions. Members of the Advisory Committee shall have the right to attend meetings of the Operating Committee or any Subcommittee, to receive information concerning the operation of the Central Repository (subject to Section 4.13(e)), and to submit their views to the Operating Committee or any Subcommittee on matters pursuant to this Agreement prior to a decision by the Operating Committee on such matters; provided that members of the Advisory Committee shall have no right to vote on any matter considered by the Operating Committee or any Subcommittee and that the Operating Committee or any Subcommittee may meet in Executive Session if, by Majority Vote, the Operating Committee or Subcommittee determines that such an Executive Session is advisable. The Operating Committee may solicit and consider views on the operation of the Central Repository in addition to those of the Advisory Committee.

(e) Members of the Advisory Committee shall have the right to receive information concerning the operation of the Central Repository; provided that the Operating Committee retains the authority to determine the scope and content of information supplied to the Advisory Committee, which shall be limited to that information that is necessary and appropriate for the Advisory Committee to fulfill its functions. Any information received by members of the Advisory Committee in furtherance of the performance of their functions pursuant to this Agreement shall remain confidential unless otherwise specified by the Operating Committee.

ARTICLE V

INITIAL PLAN PROCESSOR SELECTION

Section 5.1. Selection Committee. The Participants shall establish a Selection Committee in accordance with this Article V to evaluate and review Bids and select the Initial Plan Processor.

(a) Composition. Each Participant shall select from its staff one (1) senior officer ("Voting Senior Officer") to represent the Participant as a member of the Selection Committee. In the case of Affiliated Participants, one (1) individual may be (but is not required to be) the Voting Senior Officer for more than one or all of the Affiliated Participants. Where one (1) individual serves as the Voting Senior Officer for more than one Affiliated Participant, such individual shall have the right to vote on behalf of each such Affiliated Participant.

(b) Voting.

(i) Unless recused pursuant to Sections 5.1(b)(ii), 5.1(b)(iii), or 5.1(b)(iv), each Participant shall have one vote on all matters considered by the Selection Committee.

(ii) No Bidding Participant shall vote on whether a Shortlisted Bidder shall be permitted to revise its Bid pursuant to Section 5.2(c)(ii) or 5.2(d)(i) below if a Bid submitted by or including the Participant or an Affiliate of the Participant is a Shortlisted Bid.

(iii) No Bidding Participant shall vote in the process narrowing the set of Shortlisted Bidders as set forth in Section 5.2(c)(iii) if a Bid submitted by or including the Participant or an Affiliate of the Participant is a Shortlisted Bid.

(iv) No Bidding Participant shall vote in any round if a Bid submitted by or including the Participant or an Affiliate of the Participant is a part of such round.

(v) All votes by the Selection Committee shall be confidential and non-public. All such votes shall be tabulated by an independent third party approved by the Operating Committee, and a Participant's individual votes shall not be disclosed to other Participants or to the public.

(c) Quorum.

(i) Any action requiring a vote by the Selection Committee can only be taken at a meeting in which all Participants entitled to vote are present. Meetings of the Selection Committee shall be held as needed at such times and locations as shall from time to time be determined by the Selection Committee. Meetings may be held by conference telephone or other acceptable electronic means if all Participants entitled to vote consent thereto in writing or by other means the Selection Committee deems acceptable.

(ii) For purposes of establishing a quorum, a Participant is considered present at a meeting only if the Participant's Voting Senior Officer is either in physical attendance at the meeting or is participating by conference telephone or other acceptable electronic means.

(iii) Any Participant recused from voting on a particular action pursuant to Section 5.1(b) above shall not be considered "entitled to vote" for purposes of establishing whether a quorum is present for a vote to be taken on that action.

(d) Qualifications for Voting Senior Officer of Bidding Participants. The following criteria must be met before a Voting Senior Officer is eligible to represent a Bidding Participant and serve on the Selection Committee:

(i) the Voting Senior Officer is not responsible for the Bidding Participant's market operations, and is responsible primarily for the Bidding Participant's legal and/or regulatory functions, including functions related to the formulation and implementation of the Bidding Participant's legal and/or regulatory program;

(ii) the Bidding Participant has established functional separation of its legal and/or regulatory functions from its market operations and other business or commercial objectives;

(iii) the Voting Senior Officer ultimately reports (including through the Bidding Participant's CEO or Chief Legal Officer/General Counsel) to an independent governing body that determines or oversees the Voting Senior Officer's compensation, and the Voting Senior Officer does not receive any compensation (other than what is determined or overseen by the independent governing body) that is based on achieving business or commercial objectives;

(iv) the Voting Senior Officer does not have responsibility for any non-regulatory functions of the Bidding Participant, other than the legal aspects of the organization performed by the Chief Legal Officer/General Counsel or the Office of the General Counsel;

(v) the ultimate decision making of the Voting Senior Officer position is tied to the regulatory effectiveness of the Bidding Participant, as opposed to other business or commercial objectives;

(vi) promotion or termination of the Voting Senior Officer is not based on achieving business or commercial objectives;

(vii) the Voting Senior Officer has no decision-making authority with respect to the development or formulation of the Bid submitted by or including the Participant or an Affiliate of the Participant; however, the staff assigned to developing and formulating such Bid may consult with the Voting Senior Officer, provided such staff members cannot share information concerning the Bid with the Voting Senior Officer;

(viii) the Voting Senior Officer does not report to any senior officers responsible for the development or formulation of the Bid submitted by or including the Participant or by an Affiliate of the Participant; however, joint reporting to the Bidding

Participant's CEO or similar executive officer by the Voting Senior Officer and senior staff developing and formulating such Bid is permissible, but the Bidding Participant's CEO or similar executive officer cannot share information concerning such Bid with the Voting Senior Officer;

(ix) the compensation of the Voting Senior Officer is not separately tied to income earned if the Bid submitted by or including the Participant or an Affiliate of the Participant is selected; and

(x) the Voting Senior Officer, any staff advising the Voting Senior Officer, and any similar executive officer or member of an independent governing body to which the Voting Senior Officer reports may not disclose to any Person any non-public information gained during the review of Bids, presentation by Qualified Bidders, and selection process. Staff advising the Voting Senior Officer during the Bid review, presentation, and selection process may not include the staff, contractors, or subcontractors that are developing or formulating the Bid submitted by or including a Participant or an Affiliate of the Participant.

Section 5.2. Bid Evaluation and Initial Plan Processor Selection.

(a) Initial Bid Review to Determine Qualified Bids.

(i) The Selection Committee shall review all Bids in accordance with the process developed by the Selection Committee.

(ii) After review, the Selection Committee shall vote on each Bid to determine whether such Bid is a Qualified Bid. A Bid that is deemed unqualified by at least a two-thirds (2/3rds) vote of the Selection Committee shall not be deemed a Qualified Bid and shall be eliminated individually from further consideration.

(b) Selection of Shortlisted Bids.

(i) Each Qualified Bidder shall be given the opportunity to present its Bid to the Selection Committee. Following the presentations by Qualified Bidders, the Selection Committee shall review and evaluate the Qualified Bids to select the Shortlisted Bids in accordance with the process in this Section 5.1(b).

(ii) If there are six (6) or fewer Qualified Bids, all such Qualified Bids shall be Shortlisted Bids.

(iii) If there are more than six (6) Qualified Bids but fewer than eleven (11) Qualified Bids, the Selection Committee shall select five (5) Qualified Bids as Shortlisted Bids, subject to the requirement in Section 5.2(d) below. Each Voting Senior Officer shall select a first, second, third, fourth, and fifth choice from among the Qualified Bids.

(A) A weighted score shall be assigned to each choice as follows:

(1) First choice receives five (5) points;

(2) Second choice receives four (4) points;

(3) Third choice receives three (3) points;

(4) Fourth choice receives two (2) points; and

(5) Fifth choice receives one (1) point.

(B) The five (5) Qualified Bids receiving the highest cumulative scores shall be Shortlisted Bids.

(C) In the event of a tie to select the five Shortlisted Bids, all such tied Qualified Bids shall be Shortlisted Bids.

(D) To the extent there are Non-SRO Bids that are Qualified Bids, the Shortlisted Bids selected pursuant to this Section 5.2(b)(iii) must, if possible, include at least two Non-SRO Bids. If, following the vote set forth in this Section 5.2(b)(iii), no Non-SRO Bid was selected as a Shortlisted Bid, the two Non-SRO Bids receiving the highest cumulative votes (or one Non-SRO Bid if a single Non-SRO Bid is a Qualified Bid) shall be added as Shortlisted Bids. If one Non-SRO Bid was selected as a Shortlisted Bid, the Non-SRO Bid receiving the next highest cumulative vote shall be added as a Shortlisted Bid.

(iv) If there are eleven (11) or more Qualified Bids, the Selection Committee shall select fifty percent (50%) of the Qualified Bids as Shortlisted Bids, subject to the requirement in Section 5.2(d) below. If there is an odd number of Qualified Bids, the number of Shortlisted Bids chosen shall be rounded up to the next whole number (e.g., if there are thirteen Qualified Bids, then seven Shortlisted Bids shall be selected). Each Voting Senior Officer shall select as many choices as Shortlisted Bids to be chosen.

(A) A weighted score shall be assigned to each choice in single point increments as follows:

(1) Last receives one (1) point;

(2) Next-to-last choice receives two (2) points;

(3) Second-from-last choice receives three (3) points;

(4) Third-from-last choice receives four (4) points;

(5) Fourth-from-last choice receives five (5) points; and

(6) Fifth-from-last choice receives six (6) points.

For each additional Shortlisted Bid that must be chosen, the points assigned shall increase in single point increments.

(B) The fifty percent (50%) of Qualified Bids (or, if there is an odd number of Qualified Bids, the next whole number above fifty percent (50%) of Qualified Bids) receiving the highest cumulative scores shall be Shortlisted Bids.

(C) In the event of a tie to select the Shortlisted Bids, all such tied Qualified Bids shall be Shortlisted Bids.

(D) To the extent there are Non-SRO Bids that are Qualified Bids, the Shortlisted Bids selected pursuant to this Section 5.2(b)(iv) must, if possible, include at least two Non-SRO Bids. If, following the vote set forth in this Section 5.2(b)(iv), no Non-SRO Bid was selected as a Shortlisted Bid, the two Non-SRO Bids receiving the highest cumulative votes (or one Non-SRO Bid if a single Non-SRO Bid is a Qualified Bid) shall be added as Shortlisted Bids. If one Non-SRO Bid was selected as a Shortlisted Bid, the Non-SRO Bid receiving the next highest cumulative vote shall be added as a Shortlisted Bid.

(c) Formulation of the CAT NMS Plan.

(i) The Selection Committee shall review the Shortlisted Bids to identify optimal proposed solutions for the CAT and provide descriptions of such proposed solutions for inclusion in this Agreement. This process may, but is not required to, include iterative discussions with Shortlisted Bidders to address any aspects of an optimal proposed solution that were not fully addressed in a particular Bid.

(ii) Prior to the approval of the CAT NMS Plan, all Shortlisted Bidders will be permitted to revise their Bids one or more times if the Selection Committee determines, by majority vote, that such revision(s) are necessary or appropriate.

(iii) Prior to approval of the CAT NMS Plan, and either before or after any revisions to Shortlisted Bids are accepted, the Selection Committee may determine, by at least a two-thirds vote, to narrow the number of Shortlisted Bids to three Bids, in accordance with the process in this Section 5.2(c)(iii).

(A) Each Voting Senior Officer shall select a first, second, and third choice from among the Shortlisted Bids.

(B) A weighted score shall be assigned to each choice as follows:

(1) First receives three (3) points;

(2) Second receives two (2) points; and

(3) Third receives one (1) point.

(C) The three Shortlisted Bids receiving the highest cumulative scores will be the new set of Shortlisted Bids.

(D) In the event of a tie that would result in more than three final Shortlisted Bids, the votes shall be recounted, omitting each Voting Senior Officer's third choice, in order to break the tie. If this recount produces a tie that would result in a number of final Shortlisted Bids larger than or equal to that from the initial count, the results of the initial count shall constitute the final set of Shortlisted Bids.

(E) To the extent there are Non-SRO Bids that are Shortlisted Bids, the final Shortlisted Bids selected pursuant to this Section 5.2(c)(iii) must, if possible, include at least one Non-SRO Bid. If following the vote set forth in this Section 5.2(c)(iii), no Non-SRO Bid was selected as a final Shortlisted Bid, the Non-SRO Bid receiving the highest cumulative votes shall be retained as a Shortlisted Bid.

(F) The third party tabulating votes, as specified in Section 5.1(b)(5), shall identify to the Selection Committee the new set of Shortlisted Bids, but shall keep confidential the individual scores and rankings of the Shortlisted Bids from the process in this Section 5.2(c)(iii).

(iv) The Participants shall incorporate information on optimal proposed solutions in this Agreement, including cost-benefit information as required by SEC Rule 613.

(d) Review of Shortlisted Bids Under the CAT NMS Plan.

(i) A Shortlisted Bidder shall be permitted to revise its Bid only upon approval by a majority of the Selection Committee, subject to the recusal provision in Section 5.1(b)(ii) above, that revisions are necessary or appropriate in light of the content of the Shortlisted Bidder's initial Bid and the provisions in this Agreement. A Shortlisted Bidder may not revise its Bid unless approved to do so by the Selection Committee pursuant to this Section 5.2(d)(i).

(ii) The Selection Committee shall review and evaluate all Shortlisted Bids, including any permitted revisions thereto submitted by Shortlisted Bidders. In performing the review and evaluation, the Selection Committee may consult with the Advisory Committee established pursuant to paragraph (b)(7) of SEC Rule 613 and Section 4.13, and such other Persons as the Selection Committee deems appropriate.

(e) Selection of Plan Processor Under this Agreement.

(i) There shall be two rounds of voting by the Selection Committee to select the Initial Plan Processor from among the Shortlisted Bidders. Each round shall be scored independently of prior rounds of voting, including the scoring to determine the Shortlisted Bids under Section 5.2(b).

(ii) Each Participant shall have one vote in each round, except that no Bidding Participant shall be entitled to vote in any round if the Participant's Bid, a Bid submitted by an Affiliate of the Participant, or a Bid including the Participant or an Affiliate of the Participant is considered in such round.

(iii) First Round Voting by the Selection Committee.

(A) In the first round of voting, each Voting Senior Officer, subject to the recusal provisions in Section 5.2(e)(ii), shall select a first and second choice from among the Shortlisted Bids.

(B) A weighted score shall be assigned to each choice as follows:

(1) First choice receives two (2) points; and

(2) Second choice receives one (1) point.

(C) The two Shortlisted Bids receiving the highest cumulative scores in the first round shall advance to the second round.

(D) In the event of a tie that would result in more than two Shortlisted Bids advancing to the second round, the tie shall be broken by assigning one point per vote, with the Shortlisted Bid(s) receiving the highest number of votes advancing to the second round. If, at this point, the Shortlisted Bids remain tied, a revote shall be taken with each vote receiving one point. If the revote results in a tie, the Participants shall identify areas for further discussion and, following any such discussion, voting shall continue until two Shortlisted Bids are selected to advance to the second round.

(iv) Second Round Voting by the Selection Committee.

(A) In the second round of voting, each Voting Senior Officer, subject to the recusal provisions in Section 5.2(e)(ii) above, shall vote for one Shortlisted Bid.

(B) The Shortlisted Bid receiving the most votes in the second round shall be selected, and the proposed entity included in the Shortlisted Bid to serve as the Plan Processor shall be selected as the Plan Processor.

(C) In the event of a tie, a revote shall be taken. If the revote results in a tie, the Participants shall identify areas for further discussions with the two Shortlisted Bidders. Following any such discussions, voting shall continue until one Shortlisted Bid is selected.

ARTICLE VI

FUNCTIONS AND ACTIVITIES OF CAT SYSTEM

Section 6.1. Plan Processor.

(a) The Initial Plan Processor shall be selected in accordance with Article V and shall serve as the Plan Processor until its resignation or removal from such position in accordance with this Section 6.1. The Company, under the direction of the Operating Committee shall enter into one or more agreements with the Plan Processor obligating the Plan Processor to perform the functions and duties contemplated by this Agreement to be performed by the Plan Processor, as well as such other functions and duties the Operating Committee deems necessary or appropriate.

(b) The Plan Processor may appoint such officers of the Plan Processor as it deems necessary and appropriate to perform its functions under this Agreement and SEC Rule 613; provided that the Plan Processor shall, at a minimum, appoint, in accordance with Section 6.2: (i) the Chief Compliance Officer; (ii) the Chief Information Security Officer; and (iii) the Independent Auditor. Notwithstanding anything to the contrary, the Operating Committee, by Supermajority Vote, shall approve any appointment or removal of the Chief Compliance Officer, the Chief Information Security Officer, or the Independent Auditor.

(c) The Plan Processor shall develop and, with the prior approval of the Operating Committee, implement policies, procedures, and control structures related to the CAT System that are consistent with SEC Rule 613(e)(4), Appendix C, and Appendix D.

(d) The Plan Processor shall:

(i) comply with applicable provisions of 15 U.S.C. § 78u-6 (Securities Whistleblower Incentives and Protection) and the recordkeeping requirements of SEC Rule 613(e)(8);

(ii) consistent with Appendix D, Central Repository Requirements, ensure the effective management and operation of the Central Repository;

(iii) consistent with Appendix D, Data Management, ensure the accuracy of the consolidation of the CAT Data reported to the Central Repository pursuant to Section 6.3 and Section 6.4; and

(iv) consistent with Appendix D, Upgrade Process and Development of New Functionality, design and implement appropriate policies and procedures governing the determination to develop new functionality for the CAT including, among other requirements, a mechanism by which changes can be suggested by Advisory Committee members, Participants, or the SEC. Such policies and procedures also shall: (A) provide for the escalation of reviews of proposed technological changes and upgrades (including as required by Section 6.1(i) and Section 6.1(j) or as otherwise appropriate) to the Operating Committee; and (B) address the handling of surveillance, including coordinated, SEC Rule 17d-2 or Regulatory Service Agreement(s) ("RSA") surveillance queries and requests for data.

(e) Any policy, procedure or standard (and any material modification or amendment thereto) applicable primarily to the performance of the Plan Processor's duties as the Plan Processor (excluding, for the avoidance of doubt, any policies, procedures or standards generally applicable to the Plan Processor's operations and employees) shall become effective only upon approval thereof by the Operating Committee.

(f) The Plan Processor shall, subject to the prior approval of the Operating Committee, establish appropriate procedures for escalation of matters to the Operating Committee.

(g) In addition to other policies, procedures and standards generally applicable to the Plan Processor's employees and contractors, the Plan Processor shall have hiring standards and shall conduct and enforce background checks (e.g., fingerprint-based) for all of its employees and contractors to ensure the protection, safeguarding and security of the facilities, systems, networks, equipment and data of the CAT System, and shall have an insider and external threat policy to detect, monitor and remedy cyber and other threats.

(h) The Plan Processor shall enter into appropriate Service Level Agreements ("SLAs") governing the performance of the Central Repository, as generally described in Appendix D, Functionality of the CAT System, with the prior approval of the Operating Committee. The Plan Processor in conjunction with the Operating Committee shall regularly review and, as necessary, update the SLAs, in accordance with the terms of the SLAs. As further contemplated in Appendix C, System Service Level Agreements (SLAs), and in Appendix D, System SLAs, the Plan Processor may enter into appropriate service level agreements with third parties applicable to the Plan Processor's functions related to the CAT System ("Other SLAs"), with the prior approval of the Operating Committee. The Chief Compliance Officer and/or the Independent Auditor shall, in conjunction with the Plan Processor and, as necessary, the Operating Committee, regularly review and, as necessary, update the Other SLAs, in accordance with the terms of the applicable Other SLA.

(i) The Plan Processor shall, on an ongoing basis and consistent with any applicable policies and procedures, evaluate and implement potential system changes and upgrades to maintain and improve the normal day-to-day operating function of the CAT System.

(j) In consultation with the Operating Committee, the Plan Processor shall, on an as needed basis and consistent with any applicable operational and escalation policies and procedures, implement such material system changes and upgrades as may be required to ensure effective functioning of the CAT System (i.e., those system changes and upgrades beyond the scope contemplated by Section 6.1(i)).

(k) In consultation with the Operating Committee, the Plan Processor shall, on an as needed basis, implement system changes and upgrades to the CAT System to ensure compliance with any applicable laws, regulations or rules (including those promulgated by the SEC or any Participant).

(l) The Plan Processor shall develop and, with the prior approval of the Operating Committee, implement a securities trading policy, as well as necessary procedures, control structures and tools to enforce this policy. The securities trading policy shall include:

(i) the category(ies) of employees, and as appropriate, contractors, of the Plan Processor to whom the policy will apply;

(ii) the scope of securities that are allowed or not allowed for trading;

(iii) the creation and maintenance of restricted trading lists;

(iv) a mechanism for declaring new or open account activity;

(v) a comprehensive list of any exclusions to the policy (e.g., blind trust, non-discretionary accounts);

(vi) requirements for duplicative records to be received by the Plan Processor for periodic review; and

(vii) a mechanism to review employee trading accounts.

(m) The Plan Processor shall develop and, with the prior approval of the Operating Committee, implement a training program that addresses the security and confidentiality of all information accessible from the CAT, as well as the operational risks associated with accessing the Central Repository. The training program will be made available to all individuals who have access to the Central Repository on behalf of the Participants or the SEC, prior to such individuals being granted access to the Central Repository.

(n) The Operating Committee will review the Plan Processor's performance under this Agreement at least once each year, or more often than once each year upon the request of two Participants that are not Affiliated Participants. The Operating Committee shall notify the SEC of any determination made by the Operating Committee concerning the continuing engagement of the Plan Processor as a result of the Operating Committee's review of the Plan Processor and shall provide the SEC with a copy of any reports that may be prepared in connection therewith.

(o) The Plan Processor shall provide the Operating Committee regular reports on the CAT System's operation and maintenance. The reports shall address:

(i) operational performance management information regarding the capacity and performance of the CAT System as specified by the Operating Committee. Such reports shall at a minimum address:

(A) the capacity and performance of the Central Repository, including at a minimum the requirements set forth in Appendix D, Central Repository Requirements;

(B) the basic functionality of the CAT System, including the functions set forth in Appendix D, Functionality of the CAT System.

(ii) data security issues for the Plan Processor and the Central Repository taking into account the data security requirements set forth in Appendix D, Data Security;

(iii) Participant usage statistics for the Plan Processor and the Central Repository, including capacity planning studies and daily reports called for by Appendix D, Capacity Requirements, as well as business continuity planning and disaster recovery issues for the Plan Processor and the Central Repository, taking into account the business continuity planning and disaster recovery requirements set forth in Appendix D, BCP / DR Process;

(iv) system improvement issues with the Plan Processor and the Central Repository as contemplated by Appendix D, Upgrade Process and Development of New Functionality;

(v) Error Rates relating to the Central Repository,[1] including, in each case to the extent the Operating Committee determines necessary or advisable, Error Rates by day and by delta over time, and Compliance Thresholds by CAT Reporter, by Reportable Event, by age before resolution, by symbol, by symbol type (e.g., ETF and Index) and by event time (by hour and cumulative on the hour) as set forth in Appendix C, Error Communication, Correction, and Processing;

(vi) financial statements of the Plan Processor prepared in accordance with GAAP (A) audited by an independent public accounting firm or (B) certified by the Plan Processor's Chief Financial Officer (which financial statements contemplated by this Section 6.1(o)(vi) shall be provided no later than 90 days after the Plan Processor's fiscal year end);

(vii) continued solvency of the Plan Processor;

(viii) budgetary status of any items subject to Section 6.2(a)(ii);

(ix) internal audit analysis and the status of any internal audit related deliverables; and

(x) additional items as requested by the Operating Committee, any Officer of the Company, or the Independent Auditor.

(p) Upon the request of the Operating Committee or any Subcommittee, the Plan Processor shall attend any meeting of the Operating Committee or such Subcommittee.

(q) The Operating Committee, by Supermajority Vote, may remove the Plan Processor from such position at any time.

(r) The Operating Committee may, by Majority Vote, remove the Plan Processor from such position at any time if it determines that the Plan Processor has failed to perform its functions in a reasonably acceptable manner in accordance with the provisions of this

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[1] This Error Rate includes errors by CAT Reporters and linkage validation errors. In addition, errors attributable to the Plan Processor will be memorialized and reported to the Operating Committee.

Agreement or that the Plan Processor's expenses have become excessive and are not justified. In making such determination, the Operating Committee shall consider, among other factors: (i) the reasonableness of the Plan Processor's response to requests from Participants or the Company for technological changes or enhancements; (ii) results of any assessments performed pursuant to Section 6.6; (iii) the timeliness of conducting preventative and corrective information technology system maintenance for reliable and secure operations; (iv) compliance with requirements of Appendix D; and (v) such other factors related to experience, technological capability, quality and reliability of service, costs, back-up facilities, failure to meet service level agreement(s) and regulatory considerations as the Operating Committee may determine to be appropriate.

(s) The Plan Processor may resign from such position; provided that no such resignation shall be effective earlier than two (2) years (or such other shorter period as may be determined by the Operating Committee by Supermajority Vote) after the Plan Processor provides written notice of such resignation to the Company.

(t) The Operating Committee, by Supermajority Vote, shall fill any vacancy in the Plan Processor position, and shall establish a Plan Processor Selection Subcommittee in accordance with Section 4.12 to evaluate and review Bids and make a recommendation to the Operating Committee with respect to the selection of the successor Plan Processor. Any successor Plan Processor appointed pursuant to this Section 6.1(t) shall be subject to all the terms and conditions of this Agreement applicable to the Plan Processor commencing from such appointment effective date.

(u) The Plan Processor shall afford to Participants and the Commission such access to the Representatives of the Plan Processor as any Participant or the Commission may reasonably request solely for the purpose of performing such Person's regulatory and oversight responsibilities pursuant to the federal securities laws, rules, and regulations or any contractual obligations, and shall direct such Representatives to reasonably cooperate with any inquiry, investigation, or proceeding conducted by or on behalf of any Participant or the Commission related to such purpose.

Section 6.2. Chief Compliance Officer and Chief Information Security Officer.

(a) Chief Compliance Officer.

(i) The Plan Processor shall designate an employee of the Plan Processor to serve, subject to the approval of the Operating Committee by Supermajority Vote, as the Chief Compliance Officer. The Plan Processor shall also designate at least one other employee (in addition to the person then serving as Chief Compliance Officer), which employee the Operating Committee has previously approved, to serve temporarily as the Chief Compliance Officer if the employee then serving as the Chief Compliance Officer becomes unavailable or unable to serve in such capacity (including by reason of injury or illness). Any person designated to serve as the Chief Compliance Officer (including to serve temporarily) shall be appropriately qualified to serve in such capacity based on the duties and responsibilities assigned to the Chief Compliance Officer under this Agreement and shall dedicate such person's entire working time to such service (or temporary service) (except for any time required to attend to any incidental administrative matters related to such person's employment with the Plan Processor that do not detract in any material respect from such person's service as the Chief Compliance Officer). The Plan Processor may, at its discretion: (A) designate another employee previously approved by the Operating Committee by Supermajority Vote to serve in such capacity to temporarily serve as the Chief Compliance Officer if the employee then serving as the Chief Compliance Officer becomes unavailable or unable to serve as the Chief Compliance Officer (including by reason of injury or illness) for a period not in excess of thirty (30) days; or (B) designate another employee of the Plan Processor to replace, subject to approval of the Operating Committee by a Supermajority Vote, the Chief Compliance Officer. The Plan Processor shall promptly designate another employee of the Plan Processor to replace, subject to the approval of the Operating Committee by Supermajority Vote, the Chief Compliance Officer if the Chief Compliance Officer's employment with the Plan Processor terminates or the Chief Compliance Officer is otherwise unavailable or unable to serve as the Chief Compliance Officer (including by reason of injury or illness) for a period in excess of thirty (30) days. The Operating Committee shall report any action taken pursuant to Section 6.2(a)(i) to the SEC.

(ii) The Plan Processor, subject to the oversight of the Operating Committee, shall ensure that the Chief Compliance Officer has appropriate resources to fulfill the obligations of the Chief Compliance Officer set forth in SEC Rule 613 and in this Agreement.

(iii) In respect of all duties and responsibilities of the Chief Compliance Officer in such capacity (including those set forth in this Agreement), the Chief Compliance Officer shall be directly responsible and shall directly report to the Operating Committee, notwithstanding that he or she is employed by the Plan Processor.

(iv) The compensation (including base salary and bonus) of the Chief Compliance Officer shall be payable by the Plan Processor, but subject to review and approval by the Operating Committee, and the Operating Committee shall render the Chief Compliance Officer's annual performance review.

(v) The Chief Compliance Officer shall:

(A) regularly review the operation of the Central Repository to ensure its continued effectiveness based on market and technological developments and consistent with Appendix D, Upgrade Process and Development of New Functionality, and make any appropriate recommendations for enhancements to the nature of the information collected and the manner in which it is processed;

(B) identify and assist the Company in retaining an appropriately qualified independent auditor of national recognition (subject to the approval of the Operating Committee by Supermajority Vote, the "Independent Auditor") and, in collaboration with such Independent Auditor, create and implement an annual audit plan (subject to the approval of the Operating Committee) which shall at a minimum include a review of all Plan Processor policies, procedures and control structures;

(C) in collaboration with the Chief Information Security Officer, and consistent with Appendix D, Data Security, and any other applicable requirements related to data security, Customer Account Information and Customer Identifying Information, identify and assist the Company in retaining an appropriately qualified independent auditor (based on specialized technical expertise, which may be the Independent Auditor or subject to the approval of the Operating Company by Supermajority Vote, another appropriately qualified independent auditor), and in collaboration with such independent auditor, create and implement an annual audit plan (subject to the approval of the Operating Committee), which shall at a minimum include a review of all Plan Processor policies, procedures and control structures, and real time tools that monitor and address data security issues for the Plan Processor and the Central Repository;

(D) have the ability to hire or retain adequate resources as needed (e.g., advisors and counsel) to fulfill its obligations;

(E) perform reviews with respect to the matters referenced in Section 4.12(b) and report periodically, and on an as needed basis, to the Operating Committee concerning the findings of any such reviews;

(F) report to the Operating Committee and conduct any relevant review of the Plan Processor or the Central Repository requested by the Operating Committee, including directing internal or external auditors, as appropriate, to support any such review;

(G) perform and provide the regular written assessment to the SEC required by Section 6.6 and SEC Rule 613;

(H) regularly review the information security program developed and maintained by the Plan Processor pursuant to Section 6.12 and determine the frequency of such reviews;

(I) report in a timely manner to the Operating Committee any instances of non-compliance by the Plan Processor with any of the Central Repository's policies or procedures with respect to information security;

(J) conduct regular monitoring of the CAT System for compliance by each Participant and each Industry Member with SEC Rule 613, this Agreement and Appendix D, Reporting and Linkage Requirements, and provide the results: (1) with regard to Industry Members, to each Participant with oversight of such Industry Member or to such Participant's agent pursuant to a regulatory services agreement, or to the Participant responsible for enforcing compliance by such Industry Member pursuant to an agreement entered into by the applicable Participant pursuant to SEC Rule 17d-2; and (2) with regard to each Participant, to the chief regulatory officer or equivalent of such Participant;

(K) develop a mechanism to conduct regular monitoring of the CAT System for compliance by each Participant with SEC Rule 613, this Agreement, and Appendix D, Reporting and Linkage Requirements;

(L) develop and implement a notification and escalation process to resolve and remediate any alleged noncompliance by a Participant or Industry Member with the rules of the CAT, which process will include appropriate notification and order of escalation to a Participant, the Operating Committee, or the Commission;

(M) develop and conduct an annual assessment of Business Clock synchronization as specified in Section 6.8(c);

(N) have access to Plan Processor staff and documentation as appropriate to fulfill its obligations;

(O) have access to the Operating Committee, including attending all regular, special and emergency meetings of the Operating Committee as a non-voting observer; provided, however, that the Chief Compliance Officer shall not have the right to attend any Executive Session that the Operating Committee may hold;

(P) work on a more regular and frequent basis with the Compliance Subcommittee or other Subcommittee as may be determined by the Operating Committee; and

(Q) oversee the Plan Processor's compliance with applicable laws, rules and regulations related to the CAT System, in its capacity as Plan Processor.

(b) Chief Information Security Officer.

(i) The Plan Processor shall designate an employee of the Plan Processor to serve, subject to the approval of the Operating Committee by Supermajority Vote, as the Chief Information Security Officer. The Plan Processor shall also designate at least one other employee (in addition to the person then serving as Chief Information Security Officer), which employee the Operating Committee has previously approved, to serve temporarily as the Chief Information Security Officer if the employee then serving as the Chief Information Security Officer becomes unavailable or unable to serve in such capacity (including by reason of injury or illness). Any person designated to serve as the Chief Information Security Officer (including to serve temporarily) shall be appropriately qualified to serve in such capacity based on the duties and responsibilities assigned to the Chief Information Security Officer under this Agreement and shall dedicate such person's entire working time to such service (or temporary service) (except for any time required to attend to any incidental administrative matters related to such person's employment with the Plan Processor that do not detract in any material respect from such person's service as the Chief Information Security Officer). The Plan Processor may, at its discretion: (A) designate another employee previously approved by the Operating Committee by Supermajority Vote to serve in such capacity to temporarily serve as the Chief Information Security Officer if the employee then serving as Chief Information Security Officer becomes unavailable or unable to serve as Chief Information Security Officer (including by reason of injury or illness) for a period not in excess of thirty (30) days; or (B) designate another employee of the Plan Processor to replace, subject to approval of the Operating Committee by a Supermajority Vote, the Chief Information Security Officer. The Plan Processor shall promptly designate another employee of the Plan Processor to replace, subject to the approval of the Operating Committee by Supermajority Vote, the Chief Information Security Officer if the Chief Information Security Officer's employment with the Plan Processor terminates or the Chief Information Security Officer is otherwise unavailable or unable to serve as Chief Information Security Officer (including by reason of injury or illness) for a period in excess of thirty (30) days. The Operating Committee shall report any action taken pursuant to Section 6.2(b)(i) to the SEC.

(ii) The Plan Processor, subject to the oversight of the Operating Committee, shall ensure that the Chief Information Security Officer has appropriate resources to fulfill the obligations of the Chief Information Security Officer set forth in SEC Rule 613 and in this Agreement, including providing appropriate responses to questions posed by the Participants and the SEC.

(iii) In respect of all duties and responsibilities of the Chief Information Security Officer in such capacity (including those set forth in this Agreement), the Chief Information Security Officer shall be directly responsible and directly report to the Operating Committee, notwithstanding that he or she is employed by the Plan Processor.

(iv) The compensation (including base salary and bonus) of the Chief Information Security Officer shall be payable by the Plan Processor, but subject to review and approval by the Operating Committee, and the Operating Committee shall render the Chief Information Security Officer's annual performance review.

(v) Consistent with Appendices C and D, the Chief Information Security Officer shall be responsible for creating and enforcing appropriate policies, procedures, and control structures to monitor and address data security issues for the Plan Processor and the Central Repository including:

(A) data security, including the standards set forth in Appendix D, Data Security;

(B) connectivity and data transfer, including the standards set forth in Appendix D, Connectivity and Data Transfer;

(C) data encryption, including the standards set forth in Appendix D, Data Encryption;

(D) data storage and environment, including the standards set forth in Appendix D, Data Storage and Environment;

(E) data access and breach management, including the standards set forth in Appendix D, Data Access, and Appendix D, Breach Management;

(F) PII data requirements, including the standards set forth in Appendix D, PII Data Requirements;

(G) industry standards, including the standards set forth in Appendix D, Industry Standards; and

(H) penetration test reviews, which shall occur at least every year or earlier, or at the request of the Operating Committee, set forth in Appendix D, Data Storage and Environment.

(vi) At regular intervals, to the extent that such information is available to the Company, the Chief Information Security Officer shall report to the Operating Committee the activities of the Financial Services Information Sharing and Analysis Center ("FS-ISAC") or other comparable body.

Section 6.3. Data Recording and Reporting by Participants. This Section 6.3 shall become effective on the first anniversary of the Effective Date and shall remain effective thereafter until modified or amended in accordance with the provisions of this Agreement and applicable law.

(a) Format. As contemplated in Appendix D, Data Types and Sources, each Participant shall report Participant Data to the Central Repository for consolidation and storage in a format or formats specified by the Plan Processor, approved by the Operating Committee and compliant with SEC Rule 613.

(b) Timing of Recording and Reporting.

(i) As further described in Appendix D, Reporting and Linkage Requirements, each Participant shall record Participant Data contemporaneously with the applicable Reportable Event.

(ii) Each Participant shall report Participant Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Participant records such Participant Data. A Participant may voluntarily report Participant Data prior to the 8:00 a.m. Eastern Time deadline.

(c) Applicable Securities.

(i) Each Participant that is a national securities exchange shall report Participant Data for each NMS Security registered or listed for trading on such exchange or admitted to unlisted trading privileges on such exchange.

(ii) Each Participant that is a national securities association shall report Participant Data for each Eligible Security for which transaction reports are required to be submitted to such association.

(d) Participant Data. Subject to Section 6.3(c), and Appendix D, Reporting and Linkage Requirements, and in accordance with the Technical Specifications, each Participant shall record and electronically report to the Central Repository the following details for each order and each Reportable Event, as applicable ("Participant Data"):

(i) for original receipt or origination of an order:

(A) Firm Designated ID(s) for each Customer;

(B) CAT-Order-ID;

(C) SRO-Assigned Market Participant Identifier of the Industry Member receiving or originating the order;

(D) date of order receipt or origination;

(E) time of order receipt or origination (using timestamps pursuant to Section 6.8); and

(F) Material Terms of the Order;

(ii) for the routing of an order:

(A) CAT-Order-ID;

(B) date on which the order is routed;

(C) time at which the order is routed (using timestamps pursuant to Section 6.8);

(D) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order;

(E) SRO-Assigned Market Participant Identifier of the Industry Member or Participant to which the order is being routed;

(F) if routed internally at the Industry Member, the identity and nature of the department or desk to which the order is routed; and

(G) Material Terms of the Order;

(iii) for the receipt of an order that has been routed, the following information:

(A) CAT-Order-ID;

(B) date on which the order is received;

(C) time at which the order is received (using timestamps pursuant to Section 6.8);

(D) SRO-Assigned Market Participant Identifier of the Industry Member or Participant receiving the order;

(E) SRO-Assigned Market Participant Identifier of the Industry Member or Participant routing the order; and

(F) Material Terms of the Order;

(iv) if the order is modified or cancelled:

(A) CAT-Order-ID;

(B) date the modification or cancellation is received or originated;

(C) time at which the modification or cancellation is received or originated (using timestamps pursuant to Section 6.8);

(D) price and remaining size of the order, if modified;

(E) other changes in the Material Terms of the Order, if modified; and

(F) whether the modification or cancellation instruction was given by the Customer or was initiated by the Industry Member or Participant;

(v) if the order is executed, in whole or in part:

(A) CAT-Order-ID;

(B) date of execution;

(C) time of execution (using timestamps pursuant to Section 6.8);

(D) execution capacity (principal, agency or riskless principal);

(E) execution price and size;

(F) SRO-Assigned Market Participant Identifier of the Participant or Industry Member executing the order;

(G) whether the execution was reported pursuant to an effective transaction reporting plan or the Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information; and

(vi) other information or additional events as may be prescribed in Appendix D, Reporting and Linkage Requirements.

(e) CAT-Reporter-ID.

(i) Each Participant must submit, on a daily basis, all SRO-Assigned Market Participant Identifiers used by its Industry Members or itself as well as information to identify the corresponding market participant (*e.g.*, CRD number, or LEI) to the Central Repository.

(ii) The Plan Processor will use the SRO-Assigned Market Participant Identifiers and identifying information to assign a CAT-Reporter-ID to each Industry Member or Participant for internal use across all CAT Data in the Central Repository.

(f) Means of Transmission. As contemplated in Appendix D, each Participant may utilize such methods as may be provided by the Plan Processor and approved by the Operating Committee to transmit Participant Data to the Central Repository.

Section 6.4. Data Reporting and Recording by Industry Members. The requirements for Industry Members under this Section 6.4 shall become effective on the second anniversary of the Effective Date in the case of Industry Members other than Small Industry Members, or the third anniversary of the Effective Date in the case of Small Industry Members, and shall remain effective thereafter until modified or amended in accordance with the provisions of this Agreement and applicable law.

(a) Format. As contemplated in Appendix D, Data Types and Sources, each Participant shall, through its Compliance Rule, require its Industry Members to report Industry Member Data to the Central Repository for consolidation and storage in a format or formats specified by the Plan Processor, approved by the Operating Committee and compliant with SEC Rule 613.

(b) Timing of Recording and Reporting.

(i) As further described in Appendix D, Reporting and Linkage Requirements, each Participant shall, through its Compliance Rule, require its Industry Members to record Recorded Industry Member Data contemporaneously with the applicable Reportable Event.

(ii) Consistent with Appendix D, Reporting and Linkage Requirements, each Participant shall, through its Compliance Rule, require its Industry Members to report: (A) Recorded Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member records such Recorded Industry Member Data; and (B) Received Industry Member Data to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member receives such Received Industry Member Data. Each Participant shall, through its Compliance Rule, permit its Industry Members to voluntarily report Industry Member Data prior to the applicable 8:00 a.m. Eastern Time deadline.

(c) Applicable Securities.

(i) Each Participant that is a national securities exchange shall, through its Compliance Rule, require its Industry Members to report Industry Member Data for each NMS Security registered or listed for trading on such exchange or admitted to unlisted trading privileges on such exchange.

(ii) Each Participant that is a national securities association shall, through its Compliance Rule, require its Industry Members to report Industry Member Data for each Eligible Security for which transaction reports are required to be submitted to such association.

(d) Required Industry Member Data.

(i) Subject to Section 6.4(c) and Section 6.4(d)(iii) with respect to Options Market Makers, and consistent with Appendix D, Reporting and Linkage Requirements, and the Technical Specifications, each Participant shall, through its Compliance Rule, require its Industry Members to record and electronically report to the Central Repository for each order and each Reportable Event the information referred to in Section 6.3(d), as applicable ("Recorded Industry Member Data").

(ii) Subject to Section 6.4(c) and Section 6.4(d)(iii) with respect to Options Market Makers, and consistent with Appendix D, Reporting and Linkage Requirements, and the Technical Specifications, each Participant shall, through its Compliance Rule, require its Industry Members to record and report to the Central Repository the following, as applicable ("Received Industry Member Data" and collectively with the information referred to in Section 6.4(d)(i) "Industry Member Data"):

(A) if the order is executed, in whole or in part:

(1) An Allocation Report;

(2) SRO-Assigned Market Participant Identifier of the clearing broker or prime broker, if applicable; and

(3) CAT-Order-ID of any contra-side order(s);

(B) if the trade is cancelled, a cancelled trade indicator; and

(C) for original receipt or origination of an order, the Firm Designated ID, Customer Account Information, and Customer Identifying Information for the relevant Customer.

(iii) With respect to the reporting obligations of an Options Market Maker with regard to its quotes in Listed Options, Reportable Events required pursuant to Section 6.3(d)(ii) and (iv) shall be reported to the Central Repository by an Options Exchange in lieu of the reporting of such information by the Options Market Maker. Each Participant that is an Options Exchange shall, through its Compliance Rule, require its Industry Members that are Options Market Makers to report to the Options Exchange the time at which a quote in a Listed Option is sent to the Options Exchange (and, if applicable, any subsequent quote modifications and/or cancellation time when such modification or cancellation is originated by the Options Market Maker). Such time information also shall be reported to the Central Repository by the Options Exchange in lieu of reporting by the Options Market Maker.

(iv) Each Industry Member must submit an initial set of the Customer information required in Section 6.4(d)(ii)(C) to the Central Repository upon the Industry Member's commencement of reporting to the Central Repository. Each Industry Member must submit to the Central Repository any updates, additions or other changes to the Customer information required in Section 6.4(d)(ii)(C) on a daily basis thereafter. In addition, on a periodic basis as designated by the Plan Processor and approved by the Operating Committee, each Industry Member will be required to submit to the Central Repository a complete set of all Customer information required in Section 6.4(d)(ii)(C). The Plan Processor will correlate such Customer information across all Industry Members, use it to assign a Customer-ID for each Customer, and use the Customer-ID to link all Reportable Events associated with an order for a Customer.

(v) Each Participant shall, through its Compliance Rule, require its Industry Members to record and report to the Central Repository other information or additional events as may be prescribed in Appendix D, Reporting and Linkage Requirements.

(vi) Each Industry Member must submit to the Central Repository information sufficient to identify such Industry Member (e.g., CRD, or LEI).

(e) Means of Transmission. As contemplated in Appendix D, Data Types and Sources, each Industry Member may utilize such methods as may be provided by the Plan Processor and approved by the Operating Committee to transmit Industry Member Data to the Central Repository.

Section 6.5. Central Repository.

(a) Collection of Data.

(i) The Central Repository, under the oversight of the Plan Processor, and consistent with Appendix D, Central Repository Requirements, shall receive, consolidate, and retain all CAT Data.

(ii) The Central Repository shall collect (from a SIP or pursuant to an NMS Plan) and retain on a current and continuing basis, in a format compatible with the Participant Data and Industry Member Data, all data, including the following (collectively, "SIP Data"):

(A) information, including the size and quote condition, on quotes including the National Best Bid and National Best Offer for each NMS Security;

(B) Last Sale Reports and transaction reports reported pursuant to an effective transaction reporting plan filed with the SEC pursuant to, and meeting the requirements of, SEC Rules 601 and 608;

(C) trading halts, Limit Up/Limit Down price bands, and Limit Up/Limit Down indicators; and

(D) summary data or reports described in the specifications for each of the SIPs and disseminated by the respective SIP.

(b) Retention of Data.

(i) Consistent with Appendix D, Data Retention Requirements, the Central Repository shall retain the information collected pursuant to paragraphs (c)(7) and (e)(7) of SEC Rule 613 in a convenient and usable standard electronic data format that is directly available and searchable electronically without any manual intervention by the Plan Processor for a period of not less than six (6) years. Such data when available to the Participant regulatory staff and the SEC shall be linked.

(ii) The Plan Processor shall implement and comply with the records retention policy contemplated by Section 6.1(d)(i) (as such policy is reviewed and updated periodically in accordance with Section 6.1(d)(i)).

(c) Access to the Central Repository

(i) Consistent with Appendix D, Data Access, the Plan Processor shall provide Participants and the SEC access to the Central Repository (including all systems operated by the Central Repository), and access to and use of the CAT Data stored in the Central Repository, solely for the purpose of performing their respective regulatory and oversight responsibilities pursuant to the federal securities laws, rules and regulations or any contractual obligations.

(ii) The Plan Processor shall create and maintain a method of access to CAT Data stored in the Central Repository that includes the ability to run searches and generate reports. The method in which the CAT Data is stored in the Central Repository shall allow the ability to return results of queries that are complex in nature, including market reconstruction and the status of order books at varying time intervals.

(iii) The Plan Processor shall, at least annually and at such earlier time promptly following a request by the Operating Committee, certify to the Operating Committee that only Participants and the SEC have access to the Central Repository (other than access provided to any Industry Member for the purpose of correcting CAT Data previously reported to the Central Repository by such Industry Member).

(iv) Appendix C, The Security and Confidentiality of Information Reported to the Central Repository, and Appendix D, Data Security, describes the security and confidentiality of the CAT Data, including how access to the Central Repository is controlled.

(d) Data Accuracy

(i) The Operating Committee shall set and periodically review a maximum Error Rate for data reported to the Central Repository. The initial maximum Error Rate shall be set to 5%.

(ii) Consistent with Appendix D, Reporting and Linkage Requirements and Data Security, the Operating Committee shall adopt policies and procedures, including standards, requiring CAT Data reported to the Central Repository be timely, accurate, and complete, and to ensure the integrity of such CAT Data (e.g., that such CAT Data has not been altered and remains reliable). The Plan Processor shall be responsible for implementing such policies and procedures.

(iii) Appendix D, Receipt of Data from Reporters, describes the mechanisms and protocols for Participant Data and Industry Member Data submission for all key phases, including:

(A) file transmission and receipt validation;

(B) validation of CAT Data; and

(C) validation of linkages.

(e) Appendix D, Receipt of Data from Reporters, also describes the mechanisms and protocols for managing and handling corrections of CAT Data. The Plan Processor shall require an audit trail for corrected CAT Data in accordance with mechanisms and protocols approved by the Operating Committee.

(f) Data Confidentiality

(i) The Plan Processor shall, without limiting the obligations imposed on Participants by this Agreement and in accordance with the framework set forth in, Appendix D, Data Security, and Functionality of the CAT System, be responsible for the security and confidentiality of all CAT Data received and reported to the Central Repository. Without limiting the foregoing, the Plan Processor shall:

(A) require all individuals who have access to the Central Repository (including the respective employees and consultants of the Participants and the Plan Processor, but excluding employees and Commissioners of the SEC) to agree: (1) to use appropriate safeguards to ensure the confidentiality of CAT Data stored in the Central Repository; and (2) not to use CAT Data stored in the Central Repository for purposes other than surveillance and regulation in accordance with such individual's employment duties; provided that a Participant will be permitted to use the CAT Data it reports to the Central Repository for regulatory, surveillance, commercial or other purposes as permitted by applicable law, rule, or regulation;

(B) require all individuals who have access to the Central Repository (including the respective employees and consultants of the

Participants and the Plan Processor, but excluding employees and Commissioners of the SEC) to execute a personal "Safeguard of Information Affidavit" in a form approved by the Operating Committee providing for personal liability for misuse of data;

(C) develop and maintain a comprehensive information security program with a dedicated staff for the Central Repository, consistent with Appendix D, Data Security, that employs state of the art technology, which program will be regularly reviewed by the Chief Compliance Officer and Chief Information Security Officer;

(D) implement and maintain a mechanism to confirm the identity of all individuals permitted to access the CAT Data stored in the Central Repository and maintain a record of all instances where such CAT Data was accessed; and

(E) implement and maintain appropriate policies regarding limitations on trading activities of its employees and independent contractors involved with all CAT Data consistent with Section 6.1(n).

(ii) Each Participant shall adopt and enforce policies and procedures that:

(A) implement effective information barriers between such Participant's regulatory and non-regulatory staff with regard to access and use of CAT Data stored in the Central Repository;

(B) permit only persons designated by Participants to have access to the CAT Data stored in the Central Repository; and

(C) impose penalties for staff non-compliance with any of its or the Plan Processor's policies or procedures with respect to information security.

(iii) Each Participant and the Commission, as applicable, shall as promptly as reasonably practicable, and in any event within 24 hours, report to the Chief Compliance Officer, in accordance with the guidance provided by the Operating Committee, any instance of which such Participant becomes aware of: (A) noncompliance with the policies and procedures adopted by such Participant pursuant to Section 6.5(e)(ii); or (B) a breach of the security of the CAT.

(iv) The Plan Processor shall:

(A) ensure data confidentiality and security during all communications between CAT Reporters and the Plan Processor, data extractions, manipulation and transformation, loading to and from the Central Repository and data maintenance by the Central Repository;

(B) require the establishment of secure controls for data retrieval and query reports by Participant regulatory staff and the Commission; and

(C) otherwise provide appropriate database security for the Central Repository.

(v) The Company shall endeavor to join the FS-ISAC and comparable bodies as the Operating Committee may determine.

(g) Participants Confidentiality Policies and Procedures. The Participants shall establish, maintain and enforce written policies and procedures reasonably designed to (1) ensure the confidentiality of the CAT Data obtained from the Central Repository; and (2) limit the use of CAT Data obtained from the Central Repository solely for surveillance and regulatory purposes. Each Participant shall periodically review the effectiveness of the policies and procedures required by this paragraph, and take prompt action to remedy deficiencies in such policies and procedures.

(h) A Participant may use the Raw Data it reports to the Central Repository for regulatory, surveillance, commercial or other purposes as otherwise not prohibited by applicable law, rule or regulation.

Section 6.6. Regular Written Assessment.

(a) Requirement.

(i) At least every two (2) years, or more frequently in connection with any review of the Plan Processor's performance under this Agreement pursuant to Section 6.1(n), the Participants shall provide the SEC with a written assessment of the operation of the CAT that meets the requirements of SEC Rule 613, Appendix D, and this Agreement.

(ii) The Chief Compliance Officer shall oversee the assessment contemplated by Section 6.6(a)(i) and shall provide the Participants a reasonable time to review and comment upon such assessment prior to its submission to the SEC. In no case shall the written assessment be changed or amended in response to a comment by a Participant; rather, any comment by a Participant shall be provided to the SEC at the same time as the written assessment.

(b) Contents of Written Assessment. The written assessment required by this Section 6.6 shall include:

(i) an evaluation of the performance of the CAT, including the items specified in SEC Rule 613(b)(6)(i) and other performance metrics identified by the Chief Compliance Officer, and a description of such metrics;

(ii) a detailed plan, based on the evaluation conducted pursuant to Section 6.6(b)(i), for any potential improvements to the performance of the CAT with respect to the items specified in SEC Rule 613(b)(6)(ii) and any other items identified and described by the Chief Compliance Officer;

(iii) an estimate of the costs associated with any potential improvements to the performance of the CAT, including an assessment of the potential impact on competition, efficiency, and capital formation; and

(iv) an estimated implementation timeline for any potential improvements to the performance of the CAT, if applicable.

Section 6.7. Implementation.

(a) Unless otherwise ordered by the SEC:

(i) within two (2) months after the Effective Date, the Participants shall jointly select the winning Shortlisted Bid and the Plan Processor pursuant to the process set forth in Article V. Following the selection of the Initial Plan Processor, the Participants shall file with the Commission a statement identifying the Plan Processor and including the information required by SEC Rule 608;

(ii) within four (4) months after the Effective Date, each Participant shall, and through its Compliance Rule shall require its Industry Members to, synchronize its or their Business Clocks as required by Section 6.8 and certify to the Chief Compliance Officer (in the case of Participants) or the applicable Participant (in the case of Industry Members) that such Participant has met this requirement;

(iii) within one (1) year after the Effective Date, each Participant shall report to the Central Repository Participant Data;

(iv) within fourteen (14) months after the Effective Date, each Participant shall implement a new or enhanced surveillance system(s) in accordance with Section 6.10;

(v) within two (2) years after the Effective Date, each Participant shall, through its Compliance Rule, require its Industry Members (other than Small Industry Members) to report to the Central Repository Industry Member Data; and

(vi) within three (3) years after the Effective Date, each Participant shall, through its Compliance Rule, require its Small Industry Members to report to the Central Repository Industry Member Data.

(b) The Chief Compliance Officer shall appropriately document objective milestones to assess progress toward the implementation of this Agreement.

(c) Industry Members and Participants shall be required to participate in testing with the Central Repository on a schedule to be determined by the Operating Committee.

(d) Appendix C, A Plan to Eliminate Existing Rules and Systems (SEC Rule 613(a)(1)(ix)), and Appendix D, Data Types and Sources, set forth additional implementation details concerning the elimination of rules and systems.

Section 6.8. Timestamps and Synchronization of Business Clocks.

(a) Each Participant shall:

(i) other than such Business Clocks used solely for Manual Order Events, synchronize its Business Clocks at a minimum to within 50 milliseconds of the time maintained by the National Institute of Standards and Technology, consistent with industry standards;

(ii) other than such Business Clocks used solely for Manual Order Events, through its Compliance Rule, require its Industry Members to:

(A) synchronize their respective Business Clocks at a minimum to within fifty (50) milliseconds of the time maintained by the National Institute of Standards and Technology, and maintain such a synchronization;

(B) certify periodically (according to a schedule to be defined by the Operating Committee) that their Business Clocks meet the requirements of the Compliance Rule;

(C) and report to the Plan Processor and the Participant any violation of the Compliance Rule pursuant to the thresholds set by the Operating Committee; and

(iii) synchronize its Business Clocks and, through its Compliance Rule, require its Industry Members to synchronize their Business Clocks used solely for Manual Order Events at a minimum to within one second of the time maintained by the National Institute of Standards and Technology ("NIST"), consistent with industry standards, and maintain such synchronization. Each Participant shall require its Industry Members to certify periodically (according to a schedule defined by the Operating Committee) that their Business Clocks used solely for Manual Order Events meet the requirements of the Compliance Rule. The Compliance Rule of a Participant shall require its Industry Members using Business Clocks solely for Manual Order Events to report to the Plan Processor any violation of the Compliance Rule pursuant to the thresholds set by the Operating Committee.

(b) Each Participant shall, and through its Compliance Rule shall require its Industry Members to, report information required by SEC Rule 613 and this Agreement to the Central Repository in milliseconds. To the extent that any Participant utilizes timestamps in increments finer than the minimum required in this Agreement, such Participant shall utilize such finer increment when reporting CAT Data to the Central Repository so that all Reportable Events reported to the Central Repository can be adequately sequenced. Each Participant shall, through its Compliance Rule: (i) require that, to the extent that its Industry Members utilize timestamps in increments finer than the minimum required in this Agreement, such Industry Members shall utilize such finer increment when reporting CAT Data to the Central Repository; and (ii) provide that a pattern or practice of reporting events outside of the required clock synchronization time period without reasonable justification or exceptional circumstances may be considered a violation of SEC Rule 613 and the CAT NMS Plan. Notwithstanding the preceding sentences, each

Participant and Industry Member shall be permitted to record and report Manual Order Events to the Central Repository in increments up to and including one second, provided that Participants and Industry Members shall be required to record and report the time when a Manual Order Event has been captured electronically in an order handling and execution system of such Participant or Industry Member ("Electronic Capture Time") in milliseconds.

(c) In conjunction with Participants' and other appropriate Industry Member advisory groups, the Chief Compliance Officer shall annually evaluate and make a recommendation to the Operating Committee as to whether industry standards have evolved such that: (i) the synchronization standard in Section 6.8(a) should be shortened; or (ii) the required time stamp in Section 6.8(b) should be in finer increments.

Section 6.9. Technical Specifications.

(a) Publication. The Plan Processor shall publish technical specifications that are at a minimum consistent with Appendices C and D, and updates thereto as needed, providing detailed instructions regarding the submission of CAT Data by Participants and Industry Members to the Plan Processor for entry into the Central Repository (collectively, the "Technical Specifications"). The Technical Specifications shall be made available on a publicly available web site to be developed and maintained by the Plan Processor. The initial Technical Specifications and any Material Amendments thereto shall be provided to the Operating Committee for approval by Supermajority Vote.

(b) Content. The Technical Specifications shall include a detailed description of the following:

(i) the specifications for the layout of files and records submitted to the Central Repository;

(ii) the process for the release of new data format specification changes;

(iii) the process for industry testing for any changes to data format specifications;

(iv) the procedures for obtaining feedback about and submitting corrections to information submitted to the Central Repository;

(v) each data element, including permitted values, in any type of report submitted to the Central Repository;

(vi) any error messages generated by the Plan Processor in the course of validating the data;

(vii) the process for file submissions (and re-submissions for corrected files);

(viii) the storage and access requirements for all files submitted;

(ix) metadata requirements for all files submitted to the CAT System;

(x) any required secure network connectivity;

(xi) data security standards, which shall, at a minimum: (A) satisfy all applicable regulations regarding database security, including provisions of Regulation Systems Compliance and Integrity under the Exchange Act ("Reg SCI"); (B) to the extent not otherwise provided for under this Agreement (including Appendix C hereto), set forth such provisions as may be necessary or appropriate to comply with SEC Rule 613(e)(4); and (C) comply with industry best practices; and

(xii) any other items reasonably deemed appropriate by the Plan Processor and approved by the Operating Committee.

(c) Amendments. Amendments to the Technical Specifications may be made only in accordance with this Section 6.9(c). For purposes of this Section 6.9(c), an amendment to the Technical Specifications shall be deemed "material" if it would require a Participant or an Industry Member to engage in significant changes to the coding necessary to submit information to the Central Repository pursuant to this Agreement or if it is required to safeguard the security or confidentiality of the CAT Data ("Material Amendment").

(i) Except for Material Amendments to the Technical Specifications, the Plan Processor shall have the sole discretion to amend and publish interpretations regarding the Technical Specifications as needed in furtherance of the purposes and requirements of this Agreement. All non-Material Amendments made to the Technical Specifications and all published interpretations shall be provided to the Operating Committee in writing at least ten (10) days before being published. Such non-Material Amendments and published interpretations shall be deemed approved ten (10) days following provision to the Operating Committee unless two (2) unaffiliated Participants call for a vote to be taken on the proposed amendment or interpretation. If an amendment or interpretation is called out for a vote by two or more unaffiliated Participants, the proposed amendment must be approved by Majority Vote of the Operating Committee. Once a non-Material amendment has been approved, or deemed approved, by the Operating Committee, the Plan Processor shall be responsible for determining the specific changes to the Central Repository and providing technical documentation of those changes, including an implementation timeline.

(ii) The Operating Committee, by Supermajority Vote, shall approve any Material Amendments to the Technical Specifications.

(iii) The Operating Committee, by Supermajority Vote, may amend the Technical Specifications on its own motion.

Section 6.10. Surveillance.

(a) Surveillance Systems. Using the tools provided for in Appendix D, Functionality of the CAT System, each Participant shall develop and implement a surveillance system, or enhance existing surveillance systems, reasonably designed to make use of the consolidated information contained in the Central Repository. Unless otherwise ordered by the

SEC, within fourteen (14) months after the Effective Date, each Participant shall initially implement a new or enhanced surveillance system(s) as required by SEC Rule 613 and the preceding sentence.

(b) Coordinated Surveillance. Participants may, but are not required to, coordinate or share surveillance efforts through the use of regulatory services agreements and agreements adopted pursuant to SEC Rule 17d-2.

(c) Use of CAT Data by Regulators.

(i) Consistent with Appendix D, Functionality of the CAT System, the Plan Processor shall provide Participants and the SEC with access to all CAT Data stored in the Central Repository. Regulators will have access to processed CAT Data through two different methods; an online targeted query tool, and user-defined direct queries and bulk extracts.

> (A) The online targeted query tool will provide authorized users with the ability to retrieve CAT Data via an online query screen that includes the ability to choose from a variety of pre-defined selection criteria. Targeted queries must include date(s) and/or time range(s), as well as one or more of a variety of fields.
>
> (B) The user-defined direct queries and bulk extracts will provide authorized users with the ability to retrieve CAT Data via a query tool or language that allows users to query all available attributes and data sources.

(ii) Extraction of CAT Data shall be consistent with all permission rights granted by the Plan Processor. All CAT Data returned shall be encrypted, and PII data shall be masked unless users have permission to view the CAT Data that has been requested.

(iii) The Plan Processor shall implement an automated mechanism to monitor direct query usage. Such monitoring shall include automated alerts to notify the Plan Processor of potential issues with bottlenecks or excessively long queues for queries or CAT Data extractions. The Plan Processor shall provide the Operating Committee or its designee(s) details as to how the monitoring will be accomplished and the metrics that will be used to trigger alerts.

(iv) The Plan Processor shall reasonably assist regulatory staff (including those of Participants) with creating queries.

(v) Without limiting the manner in which regulatory staff (including those of Participants) may submit queries, the Plan Processor shall submit queries on behalf of a regulatory staff (including those of Participants) as reasonably requested.

(vi) The Plan Processor shall staff a CAT help desk, as described in Appendix D, CAT Help Desk, to provide technical expertise to assist regulatory staff (including those of Participants) with questions about the content and structure of the CAT Data.

Section 6.11. **Debt Securities and Primary Market Transactions**. Unless otherwise ordered by the Commission, within six (6) months after the Effective Date, the Participants shall jointly provide to the SEC a document outlining how the Participants could incorporate into the CAT information with respect to equity securities that are not NMS Securities or OTC Equity Securities, including Primary Market Transactions in securities that are not NMS Securities or OTC Equity Securities and in debt securities, which document shall include details for each order and Reportable Event that may be required to be provided, which market participants may be required to provide the data, the implementation timeline, and a cost estimate.

Section 6.12. **Information Security Program**. The Plan Processor shall develop and maintain a comprehensive information security program for the Central Repository, to be approved and reviewed at least annually by the Operating Committee, and which contains at a minimum the specific requirements detailed in Appendix D, Data Security.

ARTICLE VII

CAPITAL ACCOUNTS

Section 7.1. Capital Accounts.

(a) A separate capital account ("Capital Account") shall be established and maintained by the Company for each Participant in accordance with § 704(b) of the Code and Treasury Regulation § 1.704-1 (b)(2)(iv). There shall be credited to each Participant's Capital Account the capital contributions (at fair market value in the case of contributed property) made by such Participant (which shall be deemed to be zero for the initial Participants), and allocations of Company profits and gain (or items thereof) to such Participant pursuant to Article VIII (excluding those allocated in Section 8.3). Each Participant's Capital Account shall be decreased by the amount of distributions (at fair market value in the case of property distributed in kind) to such Participant, and allocations of Company losses to such Participant pursuant to Article VIII (including expenditures which can neither be capitalized nor deducted for tax purposes, organization and syndication expenses not subject to amortization and loss on sale or disposition of Company property, whether or not disallowed under §§ 267 or 707 of the Code). Capital Accounts shall not be adjusted to reflect a Participant's share of liabilities under § 752 of the Code.

(b) If, following the date hereof, money or property is contributed to the Company in other than a de minimis amount in exchange for an equity interest in the Company (which shall not include the Participation Fee paid by a new Participant pursuant to Section 3.3, which is not treated as a contribution to capital), or money or property is distributed to a Participant in exchange for an interest in the Company but the Company is not liquidated, the Capital Accounts of the Participants shall be adjusted based on the fair market value of Company property at the time of such contribution or distribution and the unrealized income, gain, loss, or deduction inherent in the Company property which has not previously been reflected in the Capital Accounts shall be allocated among the Participants as if there had been a taxable disposition of the Company property at its fair market value on such date. The fair market value of contributed, distributed, or revalued property shall be approved by the Operating Committee or, if there is no such agreement, by an appraisal by an independent third party valuation firm selected by the Operating Committee by Majority Vote.

(c) The foregoing provisions and the other provisions of this Agreement relating to the maintenance of Capital Accounts are intended to comply with Treasury Regulation § 1.704-1(b) promulgated under § 704(b) of the Code, and shall be interpreted and applied in a manner consistent with such Regulations.

Section 7.2. __Interest__. Except as otherwise provided herein, no Participant shall be entitled to receive interest on amounts in its Capital Account.

ARTICLE VIII

ALLOCATIONS OF INCOME AND LOSS; DISTRIBUTIONS

Section 8.1. __Periodic Allocations__. As of the end of each calendar quarter or such other period selected by the Operating Committee, the net profit or net loss of the Company (and each item of income, gain, loss, deduction, and credit for federal income tax purposes) for the period shall be determined, and in the event the book value of any Company property is adjusted pursuant to Treasury Regulation § 1.704-1(b)(2)(iv)(f), net profit, net losses and items thereof shall be determined as provided in Treasury Regulation § 1.704-1(b)(2)(iv)(g). Except as provided in Section 8.2, such net profit or net loss (and each item of income, gain, loss, deduction, and credit) shall be allocated equally among the Participants.

Section 8.2. __Special Allocations__. Notwithstanding Section 8.1, this Agreement shall be deemed to contain, and the allocations of net profit and net loss as set forth in Section 8.1 shall be subject to, each of the following: (a) a "qualified income offset" as described in Treasury Regulation § 1.704-1(b)(2)(ii)(d); (b) a "partnership minimum gain chargeback" as described in Treasury Regulation § 1.704-2(f); and (c) a "partner non-recourse debt minimum gain chargeback" as described in Treasury Regulation § 1.704-2(i)(4). The Participants intend that the allocations required to be made pursuant to Section 8.1 and this Section 8.2 shall satisfy the requirements of § 704(b) of the Code and the Treasury Regulations promulgated thereunder. Without the consent of the Participants, the Operating Committee shall have the power to interpret and amend the provisions of Section 8.1 and this Section 8.2 in the manner necessary to ensure such compliance; __provided__ that such amendments shall not change the amounts distributable to a Participant pursuant to this Agreement.

Section 8.3. __Allocations Pursuant to § 704(c) of the Code__. In accordance with § 704(c) of the Code and the Treasury Regulations promulgated thereunder, income, gain, loss, and deduction with respect to any property contributed to the capital of the Company shall, solely for tax purposes, be allocated among the Participants so as to take account of any variation between the adjusted basis of such property to the Company for federal income tax purposes and its initial fair market value. In the event the book value of any Company property is adjusted pursuant to Treasury Regulation § 1.704-1 (b)(2)(iv)(f), allocations of income, gain, loss, and deduction with respect to such asset shall take account of any variation between the adjusted basis of such asset for federal income tax purposes and its adjusted book value in the same manner as under § 704(c) of the Code and the Treasury Regulations promulgated thereunder. Such allocations shall be made by the Operating Committee using the "traditional method" set forth in Treasury Regulation § 1.704-3(b). Allocations pursuant to this Section 8.3 are solely for purposes of federal, state, and local taxes and shall not affect, or in any way be taken into account in computing, any Participant's share of distributions pursuant to any provision of this Agreement.

Section 8.4. Changes in Participants' Interests. If during any fiscal period of the Company there is a change in any Participant's Company Interest as a result of the admission or withdrawal of one or more Participants, the net profit, net loss or any other item allocable to the Participants under this Article VIII for the period shall be allocated among the Participants so as to reflect their varying interests in the Company during the period. In the event that the change in the Company Interests of the Participants results from the admission or withdrawal of a Participant, the allocation of net profit, net loss, or any other item allocable among the Participants under this Article VIII shall be made on the basis of an interim closing of the Company's books as of each date on which a Participant is admitted to or withdraws from the Company; provided that the Company may use interim closings of the books as of the end of the month preceding and the month of the admission or withdrawal, and prorate the items for the month of withdrawal on a daily basis, unless the Operating Committee determines that such an allocation would be materially unfair to any Participant. In the event that the change in the Company Interests of the Participants results from a Transfer of all or any portion of a Company Interest by a Participant, the net profit, net loss, or any other items allocable among the Participants under this Article VIII shall be determined on a daily, monthly, or other basis, as determined by the Operating Committee using any permissible method under § 706 of the Code and the Treasury Regulations promulgated thereunder.

Section 8.5. Distributions.

(a) Subject to Section 10.2, cash and property of the Company shall not be distributed to the Participants unless the Operating Committee approves by Supermajority Vote (subject to § 18-607 of the Delaware Act) a distribution after fully considering the reason that such distribution must or should be made to the Participants, including the circumstances contemplated under Section 8.3, Section 8.6, and Section 9.3. To the extent a distribution is made, all Participants shall participate equally in any such distribution except as otherwise provided in Section 10.2.

(b) No Participant shall have the right to require any distribution of any assets of the Company in kind. If any assets of the Company are distributed in kind, such assets shall be distributed on the basis of their fair market value net of any liabilities as reasonably determined by the Operating Committee. Any Participant entitled to any interest in such assets shall, unless otherwise determined by the Operating Committee, receive separate assets of the Company and not an interest as a tenant-in-common with other Participants so entitled in any asset being distributed.

Section 8.6. Tax Status.

(a) The Operating Committee by Supermajority Vote, without the consent of any Participant, may cause the Company to: (i) make an election to be treated as a corporation for U.S. federal income tax purposes by filing Form 8832 with the Internal Revenue Service; or (ii) be treated a "trade association" as described in § 501(c)(6) of the Code.

(b) If the Company so elects to be taxed as a corporation or is treated as a "trade association" as described in § 501(c)(6) of the Code, it shall continue to maintain Capital Accounts in the manner provided in this Agreement, consistent with provisions of § 704 of the Code, to determine the economic rights of the Participants under this Agreement, notwithstanding that it is not taxed as a partnership for U.S. federal income tax purposes, as interpreted by the Operating Committee and the Company's counsel in a manner to preserve the economic rights and obligations of the Participants under this Agreement. Sections 8.2, 8.3 and 9.5 shall not be applicable with respect to any period during with the Company is treated as a corporation for U.S. federal income tax purposes; provided, however, if the Company is initially treated as a partnership for U.S. federal income tax purposes and has made allocations under Section 8.2, it shall adjust the Capital Accounts to reflect the amount the Capital Accounts would have been had all allocations been made pursuant to Section 8.1.

ARTICLE IX

RECORDS AND ACCOUNTING; REPORTS

Section 9.1. **Books and Records**. The Company shall maintain complete and accurate books and records of the Company in accordance with SEC Rule 17a-1, which shall be maintained and be available, in addition to any documents and information required to be furnished to the Participants under the Act, at the office of the Plan Processor and/or such other location(s) as may be designated by the Company for examination and copying by any Participant or its duly authorized representative, at such Participant's reasonable request and at its expense during ordinary business hours for any purpose reasonably related to such Participant's involvement with the CAT NMS Plan, including for compliance and other regulatory purposes, and in compliance with such other conditions as may be reasonably established by the Operating Committee. For the avoidance of doubt, all CAT Data and other books and records of the Company shall be the property of the Company, rather than the Plan Processor, and, to the extent in the possession or control of the Plan Processor, shall be made available by the Plan Processor to the Commission upon reasonable request. Except as provided in this Section 9.1 or required by non-waivable provisions of applicable law, no Participant shall have any right to examine or copy any of the books and records of the Company.

Section 9.2. **Accounting.**

(a) Except as provided in Section 9.2(b) and Section 9.3, the Operating Committee shall maintain a system of accounting established and administered in accordance with GAAP (or other standard if determined appropriate by the Operating Committee), and all financial statements or information that may be supplied to the Participants shall be prepared in accordance with GAAP (except that unaudited statements shall be subject to year-end adjustments and need not include footnotes) (or other standard if determined appropriate by the Operating Committee). To the extent the Operating Committee determines it advisable, the Company shall prepare and provide to each Participant (1) within 30 days after the end of each calendar month, an unaudited balance sheet, income statement, statement of cash flows and statement of changes in each Participant's Capital Account for, or as of the end of, (x) such month and (y) the portion of the then current Fiscal Year ending at the end of such month and (2) as soon as practicable after the end of each Fiscal Year, an audited balance sheet, income statement, statement of cash flows and statement of changes in each Participant's Capital Account for, or as of the end of, such year. The Fiscal Year shall be the calendar year unless otherwise determined by the Operating Committee.

(b) Assets received by the Company as capital contributions shall be recorded at their fair market values, and the Capital Account maintained for each Participant shall comply with Treasury Regulations § 1.704-1 (b)(2)(iv) promulgated under § 704(b) of the Code. In the event fair market values for certain assets of the Company are not determined by appraisals, the fair market value for such assets shall be reasonably agreed to among the Participants as if in arm's-length negotiations.

(c) All matters concerning accounting procedures shall be determined by the Operating Committee.

Section 9.3. Tax Returns. The Operating Committee shall cause federal, state, provincial, and local income tax returns for the Company to be prepared and timely filed with the appropriate authorities. If the Company is taxed as a partnership, it shall arrange for the timely delivery to the Participants of such information as is necessary for such Participants to prepare their federal, state and local tax returns.

Section 9.4. Company Funds. Pending use in the business of the Company or distribution to the Participants, the funds of the Company shall be held and/or invested in accordance with the then effective cash management and investment policy adopted by the Operating Committee.

Section 9.5. Tax Matters Partner.

(a) A Participant designated by the Operating Committee shall serve as the "Tax Matters Partner" of the Company for all purposes pursuant to §§ 6221-6231 of the Code. As Tax Matters Partner, the Tax Matters Partner shall: (i) furnish to each Participant affected by an audit of the Company income tax returns a copy of each notice or other communication received from the Internal Revenue Service or applicable state authority (except such notices or communications as are sent directly to the Participant); (ii) keep such Participant informed of any administrative or judicial proceeding, as required by § 6623(g) of the Code; (iii) allow each such Participant an opportunity to participate in all such administrative and judicial proceedings; and (iv) advise and consult with each such Participant as to proposed adjustments to the federal or state income tax returns of the Company.

(b) The Tax Matters Partner, as such, shall not have the authority to: (i) enter into a settlement agreement with the Internal Revenue Service that purports to bind any Participant, without the written consent of such Participant; or (ii) enter into an agreement extending the period of limitations as contemplated in § 6229(b)(1)(B) of the Code without the prior approval of the Operating Committee.

(c) The Company shall not be obligated to pay any fees or other compensation to the Tax Matters Partner in its capacity as such, but may pay compensation to the Tax Matters Partner for services rendered to the Company in any other capacity. However, the Company shall reimburse the Tax Matters Partner for any and all out-of-pocket costs and expenses (including reasonable attorneys and other professional fees) incurred by it in its capacity as Tax Matters

Partner. The Company shall indemnify, defend and hold the Tax Matters Partner harmless from and against any loss, liability, damage, costs or expense (including reasonable attorneys' fees) sustained or incurred as a result of any act or decision concerning Company tax matters and within the scope of such Participant's responsibilities as Tax Matters Partner, so long as such act or decision does not constitute gross negligence or willful misconduct.

Section 9.6. Confidentiality.

(a) For purposes of this Agreement, "Information" means information disclosed by or on behalf of the Company or a Participant (the "Disclosing Party") to the Company or any other Participant (the "Receiving Party") in connection with this Agreement or the CAT System, but excludes any CAT Data or information otherwise disclosed pursuant to the requirements of SEC Rule 613. The Receiving Party agrees to maintain the Information in confidence with the same degree of care it holds its own confidential information (but in any event not less than reasonable care). A Receiving Party may only disclose Information to its Representatives (as defined below) on a need-to-know basis, and only to those of such Representatives whom shall have agreed to abide by the non-disclosure and non-use provisions in this Section 9.6. Each Receiving Party that is a Participant agrees that he, she or it shall not use for any purpose, other than in connection with the operation of the Company, and the Company agrees not to use for any purpose not expressly authorized by the Disclosing Party, any Information. The "Representatives" of a Person are such Person's Affiliates and the respective directors, managers, officers, employees, consultants, advisors and agents of such Person and such Person's Affiliates; provided, however, that a Participant is not a Representative of the Company. The obligations set forth in this Section 9.6(a) shall survive indefinitely (including after a Participant ceases to hold any Company Interest) but shall not apply to: (i) any Information that was already lawfully in the Receiving Party's possession and, to the knowledge of the Receiving Party, free from any confidentiality obligation to the Disclosing Party at the time of receipt from the Disclosing Party; (ii) any Information that is, now or in the future, public knowledge through no act or omission in breach of this Agreement by the Receiving Party; (iii) any Information that was lawfully obtained from a third party having, to the knowledge of the Receiving Party, the right to disclose it free from any obligation of confidentiality; or (iv) any Information that was independently developed by the Receiving Party prior to disclosure to it pursuant hereto and without recourse to or reliance upon Information disclosed to it pursuant hereto as established by its written records or other competent evidence. The obligations set forth in this Section 9.6(a) shall not restrict: (x) disclosures that are, in the opinion of the Receiving Party after consultation with counsel, required to be made by applicable laws and regulations, stock market or exchange requirements or the rules of any self-regulatory organization having jurisdiction; (y) disclosures required to be made pursuant to an order, subpoena or legal process; or (z) disclosures reasonably necessary for the conduct of any litigation or arbitral proceeding among the Participants (and their respective Representatives) and/or the Company; provided that the Receiving Party shall, to the extent not prohibited by applicable law, notify the Disclosing Party prior to making any disclosure permitted by the foregoing clause (x) or clause (y), and, in the case of a disclosure permitted by the foregoing clause (y), shall consult with the Disclosing Party with respect to such disclosure, and prior to making such disclosure, to the extent not prohibited by applicable law, shall permit the Disclosing Party, at such Disclosing Party's cost and expense, to seek a protective order or similar relief protecting the confidentiality of such Information.

(b) The Company shall not, and shall cause its Representatives not to, disclose any Information of a Participant to any other Participant without the prior written approval of the disclosing Participant.

(c) A Participant shall be free, in its own discretion, to share Information of such Participant to other Participants without the approval of the Company.

ARTICLE X

DISSOLUTION AND TERMINATION

Section 10.1. **Dissolution of Company**. The Company shall, subject to the SEC's approval, dissolve and its assets and business shall be wound up upon the occurrence of any of the following events:

(a) unanimous written consent of the Participants to dissolve the Company;

(b) an event that makes it unlawful or impossible for the Company business to be continued;

(c) the termination of one or more Participants such that there is only one remaining Participant; or

(d) the entry of a decree of judicial dissolution under Section 18-802 of the Delaware Act.

Section 10.2. **Liquidation and Distribution**. Following the occurrence of an event described in Section 10.1, the Operating Committee shall act as liquidating trustee and shall wind up the affairs of the Company by: (a) selling its assets in an orderly manner (so as to avoid the loss normally associated with forced sales); and (b) applying and distributing the proceeds of such sale, together with other funds held by the Company: (i) first, to the payment of all debts and liabilities of the Company; (ii) second, to the establishments of any reserves reasonably necessary to provide for any contingent recourse liabilities and obligations; and (iii) third, to the Participants in proportion to the balances in their positive Capital Accounts (after such Capital Accounts have been adjusted for all items of income, gain, deduction, loss and items thereof in accordance with Article VII through the date of the such distribution) at the date of such distribution.

Section 10.3. **Termination**. Each of the Participants shall be furnished with a statement prepared by the Company's independent accountants, which shall set forth the assets and liabilities of the Company as of the date of the final distribution of the Company's assets under Section 10.2 and the net profit or net loss for the fiscal period ending on such date. Upon compliance with the distribution plan set forth in Section 10.2, the Participants shall cease to be such, and the liquidating trustee shall execute, acknowledge, and cause to be filed a certificate of cancellation of the Company. Upon completion of the dissolution, winding up, liquidation and distribution of the liquidation proceeds, the Company shall terminate.

ARTICLE XI

FUNDING OF THE COMPANY

Section 11.1. Funding Authority.

(a) On an annual basis the Operating Committee shall approve an operating budget for the Company. The budget shall include the projected costs of the Company, including the costs of developing and operating the CAT for the upcoming year, and the sources of all revenues to cover such costs, as well as the funding of any reserve that the Operating Committee reasonably deems appropriate for prudent operation of the Company.

(b) Subject to Section 11.2, the Operating Committee shall have discretion to establish funding for the Company, including: (i) establishing fees that the Participants shall pay; and (ii) establishing fees for Industry Members that shall be implemented by Participants. The Participants shall file with the SEC under Section 19(b) of the Exchange Act any such fees on Industry Members that the Operating Committee approves, and such fees shall be labeled as "Consolidated Audit Trail Funding Fees."

(c) To fund the development and implementation of the CAT, the Company shall time the imposition and collection of all fees on Participants and Industry Members in a manner reasonably related to the timing when the Company expects to incur such development and implementation costs. In determining fees on Participants and Industry Members the Operating Committee shall take into account fees, costs and expenses (including legal and consulting fees and expenses) incurred by the Participants on behalf of the Company prior to the Effective Date in connection with the creation and implementation of the CAT, and such fees, costs and expenses shall be fairly and reasonably shared among the Participants and Industry Members.

(d) Consistent with this Article XI, the Operating Committee shall adopt policies, procedures, and practices regarding the budget and budgeting process, assignment of tiers, resolution of disputes, billing and collection of fees, and other related matters. For the avoidance of doubt, as part of its regular review of fees for the CAT, the Operating Committee shall have the right to change the tier assigned to any particular Person pursuant to this Article XI. Any such changes will be effective upon reasonable notice to such Person.

Section 11.2. Funding Principles. In establishing the funding of the Company, the Operating Committee shall seek:

(a) to create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate and administer the CAT and the other costs of the Company;

(b) to establish an allocation of the Company's related costs among Participants and Industry Members that is consistent with the Exchange Act, taking into account the timeline for implementation of the CAT and distinctions in the securities trading operations of Participants and Industry Members and their relative impact upon Company resources and operations;

(c) to establish a tiered fee structure in which the fees charged to: (i) CAT Reporters that are Execution Venues, including ATSs, are based upon the level of market share; (ii) Industry Members' non-ATS activities are based upon message traffic; and (iii) the CAT Reporters with the most CAT-related activity (measured by market share and/or message traffic, as applicable) are generally comparable (where, for these comparability purposes, the tiered fee structure takes into consideration affiliations between or among CAT Reporters, whether Execution Venues and/or Industry Members).

(d) to provide for ease of billing and other administrative functions;

(e) to avoid any disincentives such as placing an inappropriate burden on competition and a reduction in market quality; and

(f) to build financial stability to support the Company as a going concern.

Section 11.3. Recovery.

(a) The Operating Committee will establish fixed fees to be payable by Execution Venues as provided in this Section 11.3(a):

(i) Each Execution Venue that: (A) executes transactions; or (B) in the case of a national securities association, has trades reported by its members to its trade reporting facility or facilities for reporting transactions effected otherwise than on an exchange, in NMS Stock or OTC Equity Securities will pay a fixed fee depending on the market share of that Execution Venue in NMS Stock and OTC Equity Securities, with the Operating Committee establishing at least two and no more than five tiers of fixed fees, based on an Execution Venue's NMS Stock and OTC Equity Securities market share. For these purposes, market share will be calculated by share volume.

(ii) Each Execution Venue that executes transactions in Listed Options will pay a fixed fee depending on the Listed Options market share of that Execution Venue, with the Operating Committee establishing at least two and no more than five tiers of fixed fees, based on an Execution Venue's Listed Options market share. For these purposes, market share will be calculated by contract volume.

(b) The Operating Committee will establish fixed fees to be payable by Industry Members, based on the message traffic generated by such Industry Member, with the Operating Committee establishing at least five and no more than nine tiers of fixed fees, based on message traffic. For the avoidance of doubt, the fixed fees payable by Industry Members pursuant to this paragraph shall, in addition to any other applicable message traffic, include message traffic generated by: (i) an ATS that does not execute orders that is sponsored by such Industry Member; and (ii) routing orders to and from any ATS sponsored by such Industry Member.

(c) The Operating Committee may establish any other fees ancillary to the operation of the CAT that it reasonably determines appropriate, including fees: (i) for the late or inaccurate reporting of information to the CAT; (ii) for correcting submitted information; and (iii) based on access and use of the CAT for regulatory and oversight purposes (and not including any reporting obligations).

(d) The Company shall make publicly available a schedule of effective fees and charges adopted pursuant to this Agreement as in effect from time to time. The Operating Committee shall review such fee schedule on at least an annual basis and shall make any changes to such fee schedule that it deems appropriate. The Operating Committee is authorized to review such fee schedule on a more regular basis, but shall not make any changes on more than a semi-annual basis unless, pursuant to a Supermajority Vote, the Operating Committee concludes that such change is necessary for the adequate funding of the Company.

Section 11.4. **Collection of Fees**. The Operating Committee shall establish a system for the collection of fees authorized under this Article XI. The Operating Committee may include such collection responsibility as a function of the Plan Processor or another administrator. Alternatively, the Operating Committee may use the facilities of a clearing agency registered under Section 17A of the Exchange Act to provide for the collection of such fees. Participants shall require each Industry Member to pay all applicable fees authorized under this Article XI within thirty (30) days after receipt of an invoice or other notice indicating payment is due (unless a longer payment period is otherwise indicated). If an Industry Member fails to pay any such fee when due (as determined in accordance with the preceding sentence), such Industry Member shall pay interest on the outstanding balance from such due date until such fee is paid at a per annum rate equal to the lesser of: (a) the Prime Rate plus 300 basis points; or (b) the maximum rate permitted by applicable law. Each Participant shall pay all applicable fees authorized under this Article XI as required by Section 3.7(b).

Section 11.5. **Fee Disputes**. Disputes with respect to fees the Company charges Participants pursuant to this Article XI shall be determined by the Operating Committee or a Subcommittee designated by the Operating Committee. Decisions by the Operating Committee or such designated Subcommittee on such matters shall be binding on Participants, without prejudice to the rights of any Participant to seek redress from the SEC pursuant to SEC Rule 608 or in any other appropriate forum. The Participants shall adopt rules requiring that disputes with respect to fees charged to Industry Members pursuant to this Article XI be determined by the Operating Committee or a Subcommittee. Decisions by the Operating Committee or Subcommittee on such matters shall be binding on Industry Members, without prejudice to the rights of any Industry Member to seek redress from the SEC pursuant to SEC Rule 608 or in any other appropriate forum.

ARTICLE XII

MISCELLANEOUS

Section 12.1. **Notices and Addresses**. All notices required to be given under this Agreement shall be in writing and may be delivered by certified or registered mail, postage prepaid, by hand, or by any private overnight courier service. Such notices shall be mailed or delivered to the Participants at the addresses set forth on Exhibit A to this Agreement or such other address as a Participant may notify the other Participants of in writing. Any notices to be sent to the Company shall be delivered to the principal place of business of the Company or at such other address as the Operating Committee may specify in a notice sent to all of the Participants. Notices shall be effective: (i) if mailed, on the date three (3) days after the date of mailing; or (ii) if hand delivered or delivered by private courier, on the date of delivery.

Section 12.2. Governing Law; Submission to Jurisdiction. This Agreement shall be governed by and construed in accordance with the Delaware Act and internal laws and decisions of the State of Delaware without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the application of laws of any jurisdictions other than those of the State of Delaware; provided that the rights and obligations of the Participants, Industry Members and other Persons contracting with the Company in respect of the matters covered by this Agreement shall at all times also be subject to any applicable provisions of the Exchange Act and any rules and regulations promulgated thereunder. Each of the Company and the Participants: (a) consents to submit itself to the exclusive personal jurisdiction of the Court of Chancery of the State of Delaware, New Castle County, or, if that court does not have jurisdiction, a federal court sitting in Wilmington, Delaware in any action or proceeding arising out of or relating to this Agreement or any of the transactions contemplated by this Agreement; (b) agrees that all claims in respect of such action or proceeding shall be heard and determined only in any such court; (c) agrees that it shall not attempt to deny or defeat such personal jurisdiction by motion or other request for leave from any such court; and (d) agrees not to bring any action or proceeding arising out of or relating to this Agreement or any of the transaction contemplated by this Agreement in any other court. Each of the Company and the Participants waives any defense of inconvenient forum to the maintenance of any action or proceeding so brought and waives any bond, surety or other security that might be required of any other Person with respect thereto. The Company or any Participant may make service on the Company or any other Participant by sending or delivering a copy of the process to the party to be served at the address and in the manner provided for the giving of notices in Section 12.1. Nothing in this Section 12.2, however, shall affect the right of any Person to serve legal process in any other manner permitted by law.

Section 12.3. Amendments. Except as provided by Section 3.3, Section 3.4, Section 3.7, Section 5.3, and Section 8.2, this Agreement may be amended from time to time only by a written amendment authorized by the affirmative vote of not less than two-thirds of all of the Participants or with respect to Section 3.8 by the affirmative vote of all of the Participants, in each case that has been approved by the SEC pursuant to SEC Rule 608 or has otherwise become effective under SEC Rule 608. Notwithstanding the foregoing or anything else to the contrary, to the extent the SEC grants exemptive relief applicable to any provision of this Agreement, Participants and Industry Members shall be entitled to comply with such provision pursuant to the terms of the exemptive relief so granted at the time such relief is granted irrespective of whether this Agreement has been amended.

Section 12.4. Successors and Assigns. Subject to the restrictions on Transfers set forth herein, this Agreement: (a) shall be binding upon, and inure to the benefit of, the Company and the Participants, and their respective successors and permitted assigns; and (b) may not be assigned except in connection with a Transfer of Company Interests permitted hereunder.

Section 12.5. Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one instrument. Any counterpart may be delivered by facsimile transmission or by electronic communication in portable document format (.pdf) or tagged image format (.tif), and the parties hereto agree that their electronically transmitted signatures shall have the same effect as manually transmitted signatures.

Section 12.6. Modifications to be in Writing; Waivers. This Agreement constitutes the entire understanding of the parties hereto with respect to the subject matter hereof, and no amendment, modification or alteration shall be binding unless the same is in writing and adopted in accordance with Section 12.3. No waiver of any provision of this Agreement shall be valid unless the same shall be in writing and signed by each Person granting the waiver. No waiver by any Person of any default or breach hereunder, whether intentional or not, shall be deemed to extend to any prior or subsequent default or breach or affect in any way any rights arising by virtue of any prior or subsequent such occurrence.

Section 12.7. Captions. The captions are inserted for convenience of reference only and shall not affect the construction of this Agreement.

Section 12.8. Validity and Severability. If any provision of this Agreement shall be held invalid or unenforceable, that shall not affect the validity or enforceability of any other provisions of this Agreement, all of which shall remain in full force and effect. If the final judgment of a court of competent jurisdiction declares that any term or provision hereof is invalid or unenforceable, each of the Company and the Participants agrees that the body making the determination of invalidity or unenforceability shall have the power to reduce the scope, duration or area of the term or provision, to delete specific words or phrases, or to replace any invalid or unenforceable term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be enforceable as so modified.

Section 12.9. Third Party Beneficiaries. Except to the extent provided in any separate written agreement between the Company and another Person, the provisions of this Agreement are not intended to be for the benefit of any creditor or other Person (other than a Participant in its capacity as such) to whom any debts, liabilities or obligations are owed by (or who otherwise has any claim against) the Company or any Participants. Moreover, notwithstanding anything contained in this Agreement (but subject to the immediately following sentence), no such creditor or other Person shall obtain any rights under this Agreement or shall, by reason of this Agreement, make any claim in respect of any debt, liability or obligation (or otherwise) against the Company or any Participant. Notwithstanding the foregoing provisions of this Section 12.9, each Person entitled to indemnification under Section 4.8 that is not a party to this Agreement shall be deemed to be an express third party beneficiary of this Agreement for all purposes relating to such Person's indemnification and exculpation rights hereunder.

Section 12.10. Expenses. Except as may be otherwise specifically provided to the contrary in this Agreement, including in Article XI, or as may be otherwise determined by the Operating Committee, each of the Company and the Participants shall bear its own internal costs and expenses incurred in connection with this Agreement, including those incurred in connection with all periodic meetings of the Participants or the Operating Committee, and the transactions contemplated hereby.

Section 12.11. Specific Performance. Each of the Company and the Participants acknowledges and agrees that one or more of them would be damaged irreparably in the event any of the provisions of this Agreement are not performed in accordance with their specific terms or otherwise are breached. Accordingly, each such Person agrees that each other such Person may be entitled to an injunction or injunctions to prevent breaches of the provisions of this Agreement and to enforce specifically this Agreement and the terms and provisions hereof in any action instituted in any court having jurisdiction over the Parties and the matter, in each case with no need to post bond or other security.

Section 12.12. Waiver of Partition. Each Participant agrees that irreparable damage would be done to the Company if any Participant brought an action in court to partition the assets or properties of the Company. Accordingly, each Participant agrees that such Person shall not, either directly or indirectly, take any action to require partition or appraisal of the Company or of any of the assets or properties of the Company, and notwithstanding any provisions of this Agreement to the contrary, each Participant (and such Participant's successors and permitted assigns) accepts the provisions of this Agreement as such Person's sole entitlement on termination, dissolution and/or liquidation of the Company and hereby irrevocably waives any and all right to maintain any action for partition or to compel any sale or other liquidation with respect to such Person's interest, in or with respect to, any assets or properties of the Company. Each Participant agrees not to petition a court for the dissolution, termination or liquidation of the Company.

Section 12.13. Construction. The Company and all Participants have participated jointly in negotiating and drafting this Agreement. If an ambiguity or a question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the Company and all Participants, and no presumption or burden of proof shall arise favoring or disfavoring any Person by virtue of the authorship of any provision of this Agreement.

Section 12.14. Incorporation of Exhibits, Appendices, Attachments, Recitals and Schedules. The Exhibits, Appendices, Attachments, Recitals and Schedules identified in this Agreement are incorporated herein by reference and made a part hereof.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Participants have executed this Limited Liability Company Agreement as of the day and year first above written.

PARTICIPANTS:

BATS EXCHANGE, INC.

By:______________________________

Name:____________________________

Title:_____________________________

BATS Y-EXCHANGE, INC.

By:______________________________

Name:____________________________

Title:_____________________________

BOX OPTIONS EXCHANGE LLC

By:______________________________

Name:____________________________

Title:_____________________________

C2 OPTIONS EXCHANGE, INCORPORATED

By:______________________________

Name:____________________________

Title:_____________________________

CHICAGO BOARD OPTIONS EXCHANGE, INCORPORATED

By:______________________________

Name:____________________________

Title:______________________________

CHICAGO STOCK EXCHANGE, INC.

By:______________________________

Name:______________________________

Title:______________________________

EDGA EXCHANGE, INC.

By:______________________________

Name:______________________________

Title:______________________________

EDGX EXCHANGE, INC.

By:______________________________

Name:______________________________

Title:______________________________

FINANCIAL INDUSTRY REGULATORY AUTHORITY, INC.

By:______________________________

Name:______________________________

Title:______________________________

ISE GEMINI, LLC

By:______________________________

Name:______________________________

Title:______________________________

INTERNATIONAL SECURITIES EXCHANGE, LLC

By:______________________________

Name:______________________________

Title:______________________________

MIAMI INTERNATIONAL SECURITIES EXCHANGE LLC

By:______________________________

Name:______________________________

Title:______________________________

NASDAQ OMX BX, INC.

By:______________________________

Name:______________________________

Title:______________________________

NASDAQ OMX PHLX LLC

By:______________________________

Name:______________________________

Title:______________________________

THE NASDAQ STOCK MARKET LLC

By:______________________________

Name:____________________________

Title:____________________________

NATIONAL STOCK EXCHANGE, INC.

By:____________________________

Name:____________________________

Title:____________________________

NEW YORK STOCK EXCHANGE LLC

By:____________________________

Name:____________________________

Title:____________________________

NYSE MKT LLC

By:____________________________

Name:____________________________

Title:____________________________

NYSE ARCA, INC.

By:____________________________

Name:____________________________

Title:____________________________

EXHIBIT A

PARTICIPANTS IN CAT NMS, LLC

BATS Exchange, Inc. 8050 Marshall Drive, Lenexa, KS 66214	BATS Y-Exchange, Inc. 8050 Marshall Drive Lenexa, KS 66214	BOX Options Exchange LLC 101 Arch St., Suite 610 Boston, MA 02110
C2 Options Exchange, Incorporated 400 South LaSalle St. Chicago, IL 60605	Chicago Board Options Exchange, Incorporated 400 South LaSalle St. Chicago, IL 60605	Chicago Stock Exchange, Inc. 440 South LaSalle St., Suite 800 Chicago, IL 60605
EDGA Exchange, Inc. 8050 Marshall Drive Lenexa, KS 66214	EDGX Exchange, Inc. 8050 Marshall Drive Lenexa, KS 66214	Financial Industry Regulatory Authority, Inc. 1735 K Street, NW Washington DC, 20006
ISE Gemini, LLC 60 Broad Street New York, New York 10004	International Securities Exchange, LLC 60 Broad Street New York, New York 10004	Miami International Securities Exchange LLC 7 Roszel Road, 5th floor Princeton, NJ 08540
NASDAQ OMX BX, Inc. One Liberty Plaza 165 Broadway New York, NY 10006	NASDAQ OMX PHLX LLC 1900 Market Street Philadelphia, PA 19103	The NASDAQ Stock Market LLC One Liberty Plaza 165 Broadway New York, NY 10006
National Stock Exchange, Inc. 101 Hudson Street Suite 1200 Jersey City, NJ 07302	New York Stock Exchange LLC 11 Wall St. New York, NY 10005	NYSE MKT LLC 11 Wall St. New York, NY 10005
NYSE Arca, Inc. 11 Wall St. New York, NY 10005		

APPENDIX A

Consolidated Audit Trail National Market System Plan Request for Proposal, issued February 26, 2013, version 3.0 updated March 3, 2014

Consolidated Audit Trail National Market System Plan

Request for Proposal

March 3, 2014
Version 3.0

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1 Request for Proposal Overview

The objective of this request for proposal (RFP) document is to obtain detailed information on the Bidder's abilities and expected cost to build, operate, administer and maintain the consolidated audit trail (CAT), as described herein, and provide related services. This document contains the CAT technical, business and operational requirements, as well as the information that must be provided by Bidders in response to the CAT RFP. In addition, this document contains the key criteria on which Bidders may be evaluated. The content and information in this document are the property of the self-regulatory organizations (SROs[2]) developing the National Market System (NMS) Plan (NMS Plan).

This document provides a roadmap of the technical, business and operational processes that must be put in place to comply with Securities Exchange Act Rule 613 (Rule 613), which was adopted by the Securities and Exchange Commission (SEC) in July 2012. The document is organized into three sections covering the following:

- RFP Overview: This section provides an overview of the RFP process, evaluation criteria and instructions for Bidders to respond to this RFP
- Description of CAT Requirements: This section provides an overview of the governance and oversight framework of the CAT and specifies the technical, business and ongoing operational requirements of the CAT. This section includes:
    - The functions performed by the SROs, in the governance of the CAT (known hereafter as the "NMS Plan Participants") and the selected Bidder
    - The functions to be performed by the selected Bidder
    - The key data elements (and associated data sources) that must be captured by the CAT
    - The processing and data repository requirements for the initial launch of the CAT, including the level of testing and quality assurance (QA) expected from the Bidder
    - The ongoing operational requirements of the CAT, including the operational and compliance reporting mechanisms for SRO regulatory staff and the SEC
- RFP Response: This section defines the specific items that a Bidder is required to provide related to its proposed solution to meet the requirements of the CAT

The SROs are seeking a stand-alone bid that addresses all of the technology, business and operational requirements included in this RFP. The SROs will consider bids that include subcontractors, provided that any such subcontractors are directly overseen by the Bidder. The Bidder will be solely responsible for the performance and oversight of any subcontractors and would assume liability for any actions of any subcontractors in its role as the CAT service provider. The Bidders must identify in the RFP response all subcontractors and their roles.

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[2] As required by Rule 613, the SROs responsible for developing the CAT NMS Plan are the equities and options securities exchanges and FINRA. Currently this includes the following: BATS Exchange, Inc.; BATS Y-Exchange, Inc.; BOX Options Exchange LLC; C2 Options Exchange, Incorporated; Chicago Board Options Exchange, Incorporated; Chicago Stock Exchange, Inc.; EDGA Exchange, Inc.; EDGX Exchange, Inc.; Financial Industry Regulatory Authority, Inc.; International Securities Exchange, LLC; Miami International Securities Exchange, LLC; NASDAQ OMX BX, Inc.; NASDAQ OMX PHLX, Inc.; NASDAQ Stock Market LLC; National Stock Exchange, Inc.; New York Stock Exchange LLC; NYSE Arca, Inc.; NYSE MKT LLC; and Topaz Exchange, LLC.

The SROs are committed to the transparency of the RFP process and to providing a fair environment for all potential Bidders. SROs are potential Bidders and some personnel of the potential SRO Bidders may be involved in both the SROs' joint efforts as a consortium implementing the CAT and the individual SRO's RFP response.

1.1 CAT Background

Rule 613 requires the SROs to jointly file an NMS Plan with the SEC to govern the creation, implementation and maintenance of the CAT, including a central repository to receive and store CAT data for NMS securities, as well as the potential for non-NMS securities as the scope of the CAT expands. As described in more detail later in this document, the SROs must include in the NMS Plan a complete technology solution, as well as the business, administrative and operational infrastructure required to create and oversee the technology solution. Additionally, the NMS Plan must include a process to monitor compliance with Rule 613 by all entities required to submit data to the CAT (i.e., CAT Reporters).

Rule 613 requires that the NMS Plan filed with the SEC include a cost-benefit analysis describing all of the approaches considered by the SROs to create, implement and maintain the CAT. In order to effectively perform this cost-benefit analysis, the SROs believe it is necessary to solicit bids from interested parties to create, implement and maintain the CAT so that all possible technology alternatives can be identified and the costs and benefits of each alternative analyzed. While this RFP will contain the core requirements and include certain specifics, the SROs welcome responses that reflect ideas and innovations that may not be raised in this document or that deviate from suggested approaches, as long as they adhere to the requirements of Rule 613.

Bidders must be mindful that once an entity is selected as the CAT processor, pending approval by the SEC of the NMS Plan submitted by the SROs, the selected Bidder will be required to develop detailed reporting and interface specifications and submit them to the NMS Plan Participants for approval before implementation can begin.

1.2 Project Scope

Rule 613 tasks the NMS Plan Participants with the creation of a data repository that is capable of receiving, consolidating and retaining a complete record of all transactions relating to each order in an NMS security, from receipt or origination through execution and/or cancellation. This data repository will be used by SRO regulatory staff and the SEC for surveillance, investigations and other regulatory activities.

While Rule 613 identifies several potential uses of the data (e.g., market reconstruction and surveillance), it assigns such tasks to the SROs and the SEC and not to the CAT itself. Rule 613 describes these potential uses of the data to assist in identifying the scope and form of data to be captured, processed and stored in the repository, but does not state that these tasks must or will be performed by the CAT itself. Further, data captured and stored by the CAT will be used only for regulatory purposes by SRO regulatory staff and the SEC.

Bidders should note that some sections of Rule 613 will not be a function of the CAT service provider; therefore, there are topics found in Rule 613 that are not covered in this RFP. For example, Rule 613 discusses the synchronization of clocks throughout the industry. Although this aspect will apply to the CAT service provider, the full scope of this requirement will be covered in the NMS Plan that applies to the industry as a whole.

Per Rule 613, the NMS Plan must include a plan to eliminate existing systems (or components thereof) that will be rendered duplicative by the CAT. While it is anticipated that the CAT will have significant overlap with existing regulatory reporting systems, such as Electronic Blue Sheets (EBS) and FINRA's Order Audit Trail System (OATS), complete elimination of these systems cannot be achieved until all information and products captured by these systems are included in the CAT. The selected Bidder must work closely with the NMS Plan Participants and the industry to identify the information that needs to be captured by the CAT in order to eventually retire EBS, OATS or other systems. The CAT architecture must be flexible and scalable to efficiently support future expansions to add new data sources and/or new data categories.

The NMS Plan Participants are seeking bids from potential CAT service providers not only to build the CAT functions described in this document, but also to perform business and technology operations, administration and maintenance activities for the CAT on an ongoing basis for at least the minimum period of time as described in this document.

1.3 General Conditions

This RFP is not an offer to contract. Acceptance of a proposal neither commits the SROs to award a contract to any Bidder (even if all requirements stated in this RFP are met), nor limits the SROs' right to negotiate in their best interest. The SROs reserve the right to contract with any Bidder for any reason.

The timelines provided herein are subject to change at the sole discretion of the SROs. The SROs also reserve the right to communicate with the respondents of this RFP formally and informally and to request additional information.

1.4 Right of Rejection

The SROs reserve the right to accept or reject any or all responses to this RFP, in part or in total, and to enter into discussions and/or negotiations with one or more qualified Bidders at the same time, if such action is in the best interest of the SROs.

1.5 Cost of Proposals

Expenses incurred in the preparation of responses to this RFP are the sole responsibility of the Bidder.

1.6 Business Knowledge

Bidders responding to this RFP must have knowledge of securities and market data, order routing, order events (e.g., cancellation and modification), the lifecycle of an order and the data elements associated with an order. Additionally, Bidders must be familiar with Rule 613 and understand the intent of Rule 613.

1.7 RFP Response Instructions

Bidders must respond to all of the questions contained in Section 3 of this document. Bidders must follow the section flow in their responses and copy each question, followed by an associated response. Note that some response sections may give specific instructions for the response (e.g., a diagram or flow chart). Bidders must use Arial Italic 10 pt. font for the question and Arial Normal 10pt. font for their responses.

The Bidder must indicate that all functionality and system characteristics listed in Section 2 are met in the RFP response. The Bidder must describe any deviation from the requirements in the RFP response. The

Bidder must be specific and detailed when responding to each of the questions. When appropriate, the Bidder should reference its experience respective to the delivery of the requirements.

Bidders' responses must be prepared in electronic format in Adobe PDF. Diagrams and process flows may be presented in Microsoft PowerPoint, Microsoft Visio and/or Adobe PDF.

Bidders are to submit their response via email to CATRFP@deloitte.com by 5:00 P.M. Eastern Time on April 25, 2013. When submitting the electronic copy of the response, the Bidder must ensure that the size of any single submission does not exceed 20 MB (multiple submissions will be accepted). All supporting materials and documentation must be included with the response. Bidders will receive an acknowledgement that their bids have been successfully received.

1.8 RFP Timeline

In accordance with the NMS Plan, the NMS Plan Participants will select a Bidder to perform or oversee the functions described in this document. Formal selection of a Bidder is subject to SEC approval of the NMS Plan. The anticipated RFP timeline is as follows, but is subject to change as deemed necessary by the SROs:

RFP Milestone	Date
RFP publication	February 26, 2013
Intent to Bid submission	March 5, 2013
Bidders Conference	March 8, 2013
RFP response due	April 25, 2013
RFP selection process	April 26, 2013 through June 2013
Preliminary selection of Bidder	July 2013
NMS Plan filed	December 2013
Formal selection of Bidder	Within two months of SEC approval of NMS Plan

1.9 Evaluation Criteria

Bidders will be evaluated based on their experience, expertise, industry knowledge and financial strength, as well as the ability to deliver proven solutions. Key evaluation criteria may include the following:[3]

- Ability to clearly and effectively communicate CAT reporting requirements to business, regulatory and technology constituents
- Experience and expertise of key personnel used in the Bidder's solution
- Experience with, and knowledge of, securities markets, in addition to order and execution practices
- Experience with processing large volumes of complex data

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[3] Unless otherwise stated, there is no relation in bulleted lists in this RFP between the order of items and their evaluation priority or weighting.

- Ability to demonstrate proven and robust practices for maintaining data security
- Ability to identify information/data needed to support regulation of new trading practices, market structure changes and new SEC and SRO rules as they evolve
- Architecture, design and technical approach(es) that effectively address all stated CAT requirements and are adaptable to meet future demands of the CAT
- Expected system build, maintenance and operational costs
- Expected CAT business and administrative costs
- Scalability of the solution to adapt to changes and growth of the CAT in a timely, efficient and cost-effective manner
- Development, integration and quality assurance practices and approaches that demonstrate the ability to implement a complete systems and software development lifecycle
- System and business contingency plans (e.g., comprehensive disaster recovery)
- Ability to expertly, efficiently and effectively establish and manage operational, technology, financial, human resource, compliance and legal business functions, among others
- Ability to mitigate/lessen the impact of the solution on the industry

1.10 Guiding Principles of the RFP

In creating the CAT pursuant to Rule 613, the SROs have developed the following Guiding Principles:

- The CAT must meet the specific requirements of Rule 613 and achieve the primary goal of creating a single, comprehensive audit trail to enhance regulators' ability to surveil the U.S. markets effectively and efficiently
- The reporting requirements and technology infrastructure developed must be adaptable to changing market structures and reflective of trading practices, as well as scalable to increasing market volumes
- The costs of developing, implementing and operating the CAT should be minimized to the extent possible. To this end, existing reporting structures and technology interfaces will be utilized where practical
- Industry input is a critical component in the creation of the CAT. The SROs will consider industry feedback before decisions are made with regard to reporting requirements and cost allocation models

Additional materials regarding CAT concepts presented in this document have been published on http://www.catnmsplan.com.

1.11 Proposal Process Administration

1.11.1 Intent to Bid

All Bidders must indicate their intent to bid by completing an Intent to Bid form and submitting it to the SROs. No Bidder will be allowed to participate in the bid process unless it submits this form. The form (found in Appendix I of this document) must be completed and sent via email no later than 5:00 P. M. Eastern Time on March 5, 2013 to CATRFP@deloitte.com.

For transparency purposes, all identified Bidders will be published on the http://www.catnmsplan.com website.

1.11.2 RFP Questions

Questions received through the CATRFP@deloitte.com mailbox will be responded to in writing within five business days. Questions submitted less than five days prior to the RFP response deadline may not be answered. Questions received and responses will be provided to all Bidders via the http://www.catnmsplan.com website, even if a Bidder has requested that its question(s) and corresponding response(s) not be disseminated. The Bidders that asked the questions will not be identified.

As deemed necessary, the SROs will host periodic calls throughout March and April so that Bidders may ask questions. Questions raised during such calls that have not been responded to previously by the SROs in writing and that the SROs believe are essential in responding to the RFP will be disseminated to all Bidders in writing within two business days of each call.

It is the responsibility of the Bidder to seek clarification from the SROs on any matter it considers to be unclear. The SROs shall not be responsible for any misunderstanding on the part of the Bidder concerning the RFP or its process.

1.11.3 Bidders Communications

Except for the Bidders Conference, all communications between Bidders and the SROs will be facilitated through the CATRFP@deloitte.com mailbox.

1.11.4 Confidentiality of RFP Responses [New as of September 27, 2013]

The RFP responses or parts thereof will be subject to disclosure in the following circumstances:

1. The NMS Plan, and related SEC filings in connection with SEC approval of the NMS Plan, will include descriptions of the RFP responses, which may be made anonymous and, in some cases, may be specific and include or imply the identity of a Bidder.
2. To the extent a Bidder is concerned about maintaining the confidentiality of proprietary and other sensitive information (Proprietary Information) contained in the RFP response, the Bidder must:
   a. As part of the RFP response, include an executed non-disclosure agreement (NDA) with the SROs in the form specified by the SROs. The NDA will include, among other things, provisions permitting disclosure of the full bids to the SEC on request (which will be submitted to the SEC pursuant to a Freedom of Information Act request, if appropriate). Bidders must submit signed NDAs to the CATRFP@deloitte.com mailbox no later than November 15, 2013 so that SROs can countersign and return to Bidders in advance of the submission of their bids. Bids will not be accepted without a fully executed NDA in place.
   b. Identify clearly, using double square brackets, the Proprietary Information in a copy of the RFP response submitted along with the RFP response.
   c. Limit the Proprietary Information to (a) specific phrases and words to the extent practicable, and (b) the following types of information:
      (i) confidential personnel information;
      (ii) details of information security architecture or other security-related matters;
      (iii) information prohibited from public disclosure by law; and
      (iv) information containing trade secrets or other confidential commercial or financial information.
   d. For each instance of Proprietary Information identified by the Bidder, include a notation that identifies the category (as set forth in Section 2.c. above) to which such Proprietary Information corresponds. Upon request by the SROs, a Bidder shall also substantiate the

specific basis(es) for its position that any information identified as Proprietary Information is properly classified.

3. The nature and extent to which Proprietary Information will have to be disclosed by Bidders will vary as the bidding process continues, and the need for disclosure is likely to increase at each stage in this process. The SROs may, at any time, request that a Bidder reconsider its characterization of certain information as Proprietary Information if the SROs conclude that the information must be disclosed in the NMS Plan or in associated filings. Bidders should be aware that a Bidder's unwillingness to disclose the information, to the extent the SROs deem necessary and appropriate pursuant to SEC Rule 613 and the NMS Plan, in the NMS Plan or in associated filings may impact the SROs' ability to select the Bidder as the CAT processor.
4. The Bidder selected as the CAT processor will be subject to continuing disclosure obligations, and disclosure of Proprietary Information may be required, not only in connection with the NMS Plan and associated filings for approval of the NMS Plan, but also on an ongoing basis following selection and as part of the establishment and operation of the CAT. Bidders should consider this requirement in the preparation of the RFP response. In order to be eligible to be selected as the CAT processor, a Bidder must agree to such disclosure of its operations, including the disclosure of Proprietary Information that the SROs determine is necessary and appropriate pursuant to SEC Rule 613 and the NMS Plan.

1.12 Bidders Conference

A meeting will be scheduled for March 8, 2013 to conduct an open discussion and respond to questions related to the RFP. This meeting will only be open to Bidders who have submitted the Intent to Bid form.

1.13 Bidder Selection

The SROs reserve the right to request clarification of any Bidder's proposal as they see fit. Clarification may take the form of a written request or in-person meeting. Bidders must respond to these requests in a timely manner in order to not delay the selection process.

2 CAT Requirements

2.1 Description of the CAT Oversight and Management Structure

The NMS Plan Participants are seeking to contract with a CAT service provider concerning the overall operation and administration of the CAT, including all technology requirements. Figure 1 represents the proposed CAT oversight structure. The selected Bidder will operate under the direct oversight of the NMS Plan Participants, who are ultimately responsible for compliance with Rule 613. As part of the oversight structure, an Advisory Committee will be established by the NMS Plan Participants. The role of the Advisory Committee will be to advise the NMS Plan Participants on the implementation, operation and administration of the CAT.

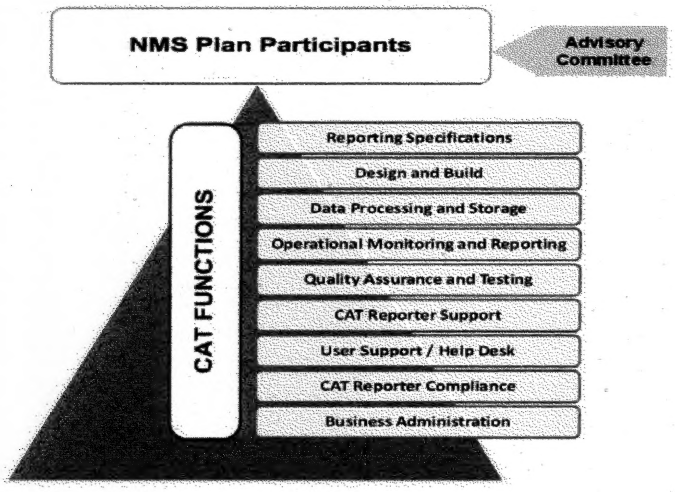

NMS Plan Participants
Advisory Committee
CAT FUNCTIONS
Reporting Specifications
Design and Build
Data Processing and Storage
Operational Monitoring and Reporting
Quality Assurance and Testing
CAT Reporter Support
User Support / Help Desk
CAT Reporter Compliance
Business Administration

Figure 1: CAT oversight structure

The potential Bidder will have professional staff (CAT staff) that will be responsible, under the oversight of the NMS Plan Participants, for the overall administration and operation of the CAT. The staff will include a senior executive level chief compliance officer (CCO), as required under Rule 613, who will regularly review the operation of the CAT to assure its continued effectiveness in light of market and technological developments and make appropriate recommendations for enhancements to the nature of the information collected and the manner in which it is processed. CAT staff will routinely interface with a wide variety of internal and external constituencies and play a key role in the development of CAT reporting guidance and education of CAT Reporters on CAT reporting requirements. The responsibilities of the CAT staff will include, but not be limited to:

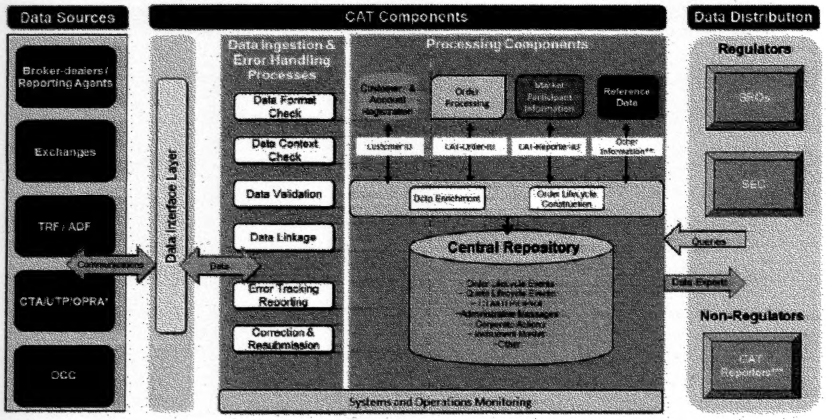
- Ensuring that the CAT operates as intended and meets the requirements of Rule 613
- Developing, obtaining NMS Plan Participants' approval of and implementing detailed supervisory and operational written policies and procedures for all CAT functions
- Reporting to and taking direction from the NMS Plan Participants that will oversee the CAT

- Providing reports and other information to the NMS Plan Participants to support their CAT oversight responsibility
- Working with SROs and the SEC to develop detailed reporting guidance that complies with Rule 613 and reflects current trading practices
- Monitoring SRO and SEC rule-making to identify changes that will affect CAT reporting requirements and developing new CAT reporting guidance as necessary
- Representing the CAT in relevant industry forums
- Authoring notices, frequently asked questions (FAQs), educational materials, technical materials and interpretive guidance to communicate reporting requirements to CAT Reporters
- Planning and coordinating industry events to educate CAT Reporters on CAT changes
- Soliciting industry feedback regarding ongoing CAT enhancements and changes
- Supporting CAT Reporters, SRO regulatory staff and the SEC with operational and technical issues
- Monitoring the data quality and performance of CAT Reporters
- Providing support as necessary to assist the NMS Plan Participants and SEC in overseeing the performance and compliance of CAT Reporters, including referring CAT Reporters exceeding maximum allowable errors to the relevant SRO for further review and possible enforcement action

2.2 Overview of Processing and Repository Data Flows

The objective of Rule 613 is to create a comprehensive central repository of order, quote and trade data that can be accessed and used by SRO regulatory staff and the SEC to oversee securities markets in the United States. This section describes how order, quote and trade data from broker-dealers, SROs and relevant industry utilities must be ingested, processed and stored to create the central repository to be used by SRO regulatory staff and the SEC. CAT Reporters will be required to submit data to the CAT in accordance with uniform interface and technical specifications designed by the selected Bidder. It is anticipated that there will be separate uniform specifications for exchanges, FINRA and broker-dealers.

The following diagram provides a high-level overview of how broker-dealer order events, customer/account information, exchange quote and order events, FINRA transaction data and other supplemental data (e.g., National Best Bids and Offers (NBBOs) and administrative messages) would flow through the CAT environment and be validated, enriched and stored for regulatory use by SRO regulatory staff and the SEC.


Data Sources
CAT Components
Data Distribution
Broker-dealers / Reporting Agents
Exchanges
TRF / ADF
CTA/UTP/OPRA*
OCC
Communications
Data Interface Layer
Data
Data Ingestion & Error Handling Processes
Data Format Check
Data Context Check
Data Validation
Data Linkage
Error Tracking Reporting
Correction & Resubmission
Processing Components
Customer & Account Registration
Order Processing
Market Participant Information
Reference Data
Customer ID
CAT-Order-ID
CAT-Reporter-ID
Other Information**
Data Enrichment
Order Lifecycle Construction
Central Repository
Order Lifecycle Events
Quote Lifecycle Events
Administrative Messages
Corporate Actions
Instrument Master
Other
Systems and Operations Monitoring
Regulators
SROs
SEC
Queries
Data Exports
Non-Regulators
CAT Reporters***

*CAT needs to support real time reporting from SIPs

** For example, "other information" may include security definitions or corporate actions

***CAT Reporters will only receive reporting statistics as opposed to full data set extracts upon initial CAT implementation

Figure 2: Overview of CAT data flows and processing components

2.2.1 Processing and Repository Requirements

Once data is ingested and validated, it must be processed to create the complete lifecycle of each order and be securely stored in a central repository in a manner that facilitates efficient and effective use of the data by SRO regulatory staff and the SEC. Required processing must be completed within established timeframes so that data is promptly available for regulatory use. This section contains the functional and technical requirements for the processing and storage of CAT data.

2.2.2 Customer and Account Information Management

2.2.2.1 Customer and Account Database

The CAT must capture and store customer and account information required by Rule 613. At a minimum, a database containing information of sufficient detail to identify each customer must be created and made available to enrich order data with customer and account information for use by SRO regulatory staff and the SEC in both targeted queries and comprehensive data scans. The SROs have proposed an approach that would require the CAT to process and store all accounts and associated customer information from all broker-dealers.[4] Details of this approach are in the Proposed RFP Concepts Document available at http://www.catnmsplan.com. Bidders should assume that full account lists will be periodically submitted in addition to the daily updates to ensure the completeness and accuracy of the account database.

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[4] Certain proposed approaches included in this RFP may require approval by the SEC before being implemented. Any alternative approaches proposed by Bidders will be considered, provided they fulfill the requirements of Rule 613.

Broker-dealers will be required to include in the account and customer information submitted to the CAT sufficient detail for the CAT to uniquely and consistently identify each customer across all broker-dealers. This information will include, at a minimum for natural persons, social security number (SSN) or Individual Taxpayer Identification Number (ITIN), date of birth, name and address. For legal entities this information will include, at a minimum, the Legal Entity Identifier (LEI) if available, tax identifier, full legal name and address. The exact data elements and formats that must be submitted for the required account and customer information will be developed by the Bidder and approved by the NMS Plan Participants. The Bidder will also be required to design and implement a robust data validation process for the submission of customer and account information. Basic customer information, such as name and address, will be available to the regulatory staff of SROs and the SEC for use in routine reviews and analysis. Personally identifiable information (PII), such as customer SSN, date of birth and tax identifier numbers, must have a separate set of permissions so that only the regulatory staff with entitlements to view PII is able to retrieve and/or view PII.

The CAT processor must have procedures in place to handle both minor and material inconsistencies in customer information. Minor data discrepancies such as variations in road name abbreviations would be resolved within the CAT processor. Material inconsistencies such as two different people with the same SSN must be communicated to the submitting CAT Reporters and resolved within the error correction timeframe described in Section 2.2.4 of this document.

2.2.2.2 Customer ID

Using the proposed approach described above, the Bidder must use the account and customer information submitted by all broker-dealer CAT Reporters to assign a unique Customer ID for each customer. The Customer ID assigned by the CAT must be unique for each customer but consistent across all broker-dealers that have an account associated with that customer. This unique CAT-assigned Customer ID will not be returned to CAT Reporters and will only be used internally by the CAT.

PII must be stored in a highly secure manner separately from the account and customer database that will be used for routine review and analysis by SRO regulatory staff and the SEC. If, during the course of a regulatory review or investigation, it is necessary for SRO regulatory staff or the SEC to obtain PII, it will be provided only to authorized users pursuant to a stringent review and approval process.

2.2.3 Order Lifecycle Assembly Requirements

All order, quote and trade data submitted by CAT Reporters must be processed by the CAT and assembled to create the complete lifecycle of each quote and order from receipt or origination through execution or cancellation. Rule 613 includes three key identifiers that are required to build the complete lifecycle of an order or quote.

- Customer ID
- CAT-Reporter-ID
- CAT-Order-ID

The requirements for the creation of a Customer ID are explained in Section 2.2.2.2. The lifecycle assembly requirements include obtaining the customer and account information associated with each CAT reportable order and storing this information such that it can be readily associated with each order lifecycle. Only the broker-dealer directly receiving an order from a customer is required to report the required customer and account information. Accordingly, assembly of a complete and accurate lifecycle across all CAT Reporters involved in an order is crucial to associating customer information with execution information.

In the definition of an order, Rule 613 includes any bid or offer. Accordingly, the original receipt or origination, modification, cancellation, routing and execution (in whole or in part) of a bid or offer must be reported to the CAT. All of the lifecycle assembly requirements described below apply equally to orders and quotes. Broker-dealers that originate quotes and transmit such quotes to an exchange or a quotation display facility (i.e., FINRA's Alternative Display Facility (ADF)) are required to report both the origination and route of the quote. In addition, exchanges and SROs operating display facilities, in their role as CAT Reporters, will be required to report to the CAT all events related to any bid or offer received or originated.

The following sections contain the requirements for CAT-Reporter-ID and CAT-Order-ID that are necessary to assemble each lifecycle so that the associated Customer ID(s) can be obtained.

2.2.3.1 CAT-Reporter-ID

Rule 613 defines CAT-Reporter-ID as, with respect to each national securities exchange, national securities association and member of a national securities exchange or national securities association, a code that uniquely and consistently identifies such person for purposes of providing data to the central repository.

For the initial implementation of the CAT, the SROs propose that the CAT-Reporter-ID be a single identifier used by each CAT Reporter to identify itself to the CAT. Individual CAT reportable events, however, could be reported to the CAT using existing market participant identifiers (e.g., FINRA MPID, NASDAQ MPID, NYSE Mnemonic, CBOE User Acronym and CHX Acronym), but such identifiers would have to be provided to the CAT prior to the submission of any CAT reportable order events containing those identifiers so that the CAT could associate the identifier with the CAT Reporter's CAT-Reporter-ID. The SROs propose that the CRD number be the foundation for CAT-Reporter-ID, but if a broker-dealer has an LEI, it could be used as long as it is provided to the CAT such that it could be associated with the broker-dealer's CRD number.

The SROs understand that the possibility for duplication exists with identifiers assigned to a broker-dealer by individual SROs (e.g., two different SROs assign the same identifier to different broker-dealers). The Bidder must design a mechanism that will allow identifiers to be associated with a particular SRO within the CAT.

Bidders should reference page 20 of the Proposed RFP Concepts document, published on the http://www.catnmsplan.com website on December 5, 2012, for a detailed description of the CAT-Reporter-ID framework described above.

2.2.3.2 CAT-Order-ID

Rule 613 defines CAT-Order-ID as a unique order identifier or a series of unique order identifiers that allows the central repository to efficiently and accurately link all reportable events for an order and all orders that result from the aggregation or disaggregation of such order. The SROs presented two solutions to the CAT-Order-ID framework in the Proposed RFP Concepts document published on the http://www.catnmsplan.com website on December 5, 2012. Based on industry feedback and analysis conducted by the SROs, the SROs are recommending the daisy chain approach for the CAT-Order-ID framework. However, any alternative solutions proposed by Bidders will be considered so long as they fulfill the requirements of Rule 613 for all order handling scenarios.

The Bidder must develop detailed reporting specifications and guidance that address all order handling scenarios known to the CAT, as well as any additional scenarios presented to the CAT by CAT Reporters as order handling and execution practices evolve.

The CAT-Order-ID framework must:

- Allow for the accurate and efficient linkage of related order events within a single firm and between CAT Reporters
- Guarantee a unique link between all related order events without relying on any form of "fuzzy" matching
- Prevent information leakage and reduce the possibility of "reverse engineering" to identify large orders or other similar material market information
- Allow for the accurate and efficient time sequencing of all order events
- Accurately link order events for all order handling scenarios that are currently or may potentially be used by CAT Reporters

As noted, the SROs are recommending a daisy chain approach to CAT-Order-ID. In the daisy chain approach, a series of unique order identifiers assigned by CAT Reporters to individual order events are linked together by the CAT and assigned a single CAT-generated CAT-Order-ID that is associated with each individual order event and used to create the complete lifecycle of an order. Each CAT Reporter would generate its own unique Order ID but could pass a different identifier as the order is routed and the CAT would link related order events from all CAT Reporters involved in the life of the order. A detailed example of the application of the daisy chain approach to an order routed to an exchange on an agency basis can be found on page 26 of the Proposed RFP Concepts document published on the http://www.catnmsplan.com website.

The SROs believe, based on their analysis to date, the daisy chain approach could handle most common order handling scenarios, including aggregation and disaggregation. Most common order handling scenarios generally apply to both equities and options. Examples of order handling scenarios that must be addressed include, in addition to the agency scenario referenced above: orders handled on a riskless principal basis, orders routed out of a national securities exchange through a broker-dealer router to another national securities exchange, orders executed on an average price basis and orders aggregated for further routing and execution. Detailed examples of these scenarios can be found on pages 27 through 30 of the Proposed RFP Concepts document published on the http://www.catnmsplan.com website.

The SROs are also considering additional order event types that could facilitate representative orders using the daisy chain approach. The SROs recently published a document with proposed representative order reporting scenarios. These scenarios and how the daisy chain approach could be applied, can be found in the Representative Order Proposal document published on the http://www.catnmsplan.com website. Further, there are order handling scenarios sometimes referred to as "complex orders" that are specific to options and may include an equity component and multiple option components (e.g., buy-write, straddle, strangle, ratio spread, butterfly and qualified contingent transactions). Typically, these orders are referenced by exchange systems on a net credit/debit basis, which can cover between two and twelve different components. Such "complex orders" must also be handled and referenced within the CAT. The Bidder must develop, in close consultation with industry participants, a linking mechanism that will allow the CAT to link the option leg(s) to the related equity leg or the individual options components to each other in a multi-leg strategy scenario.

Rule 613 also requires that certain sub-account allocations be reported to the CAT. The SROs understand that this requirement presents significant challenges to broker-dealers and are currently analyzing alternatives based on industry feedback. The SROs do not anticipate that the capture and linkage of sub-account allocations will be materially different to a potential Bidder than other types of linkages to order lifecycle events. As such, the SROs have determined that detailed descriptions of sub-account allocation reporting scenarios are not necessary for the purposes of the RFP and, therefore, are not including such descriptions in it.

Once a lifecycle is assembled by the CAT, individual lifecycle events must be stored so that each unique event (e.g., route, execution and modification) can be quickly and easily associated with the originating customer(s) for both targeted queries and comprehensive data scans. For example, an execution on an exchange must be linked to the originating customer(s) regardless of how the order may have been aggregated, disaggregated or routed through multiple broker-dealers before being sent to the exchange for execution.

2.2.4 Processing Timeframes Requirements

CAT order events must be processed within established timeframes to ensure data can be made available to SRO regulatory staff and the SEC in a timely manner. The processing timelines start on the day the order event is received by the CAT for processing. Most events must be reported to the CAT by 8:00 A.M. Eastern Time the trading day after the order event occurred (referred to as transaction date). The processing timeframes below are presented in this context. However, if an order event was submitted late, the CAT must process that event within these timeframes based on the date the event was received by the CAT. Similarly, order events that are not required to be submitted until 8:00 A.M. Eastern Time on the trading day after the information is received by the broker-dealer (e.g., sub-account allocations) must also be processed within these timeframes based on the date the event was received by the CAT.

The SROs anticipate the following timeframes (Figure 3) for the identification, communication and correction of errors from the time an order event is received by the processor:

- 12:00 P.M. Eastern Time T+1 (transaction date + one day) – Initial data validation, lifecycle linkages and communication of errors to CAT Reporters
- 8:00 A.M. Eastern Time T+3 (transaction date + three days) – Resubmission of corrected data
- 8:00 A.M. Eastern Time T+5 (transaction date + five days) – Corrected data available to SRO regulatory staff and the SEC

It is expected that at any point after data is received by the CAT and passes basic format validations, it will be available to SRO regulatory staff and the SEC, which may be before 12:00 P.M. Eastern Time T+1.

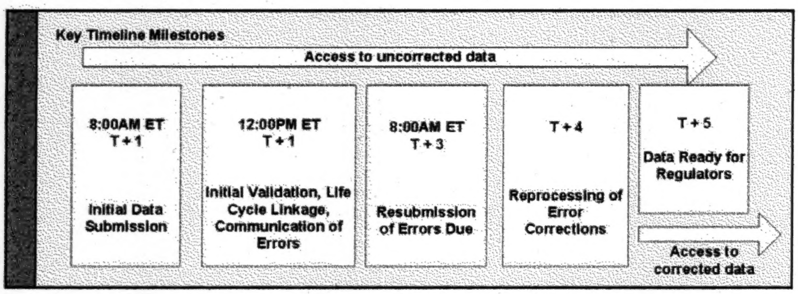

Key Timeline Milestones
Access to uncorrected data
8:00AM ET T+1
Initial Data Submission
12:00PM ET T+1
Initial Validation, Life Cycle Linkage, Communication of Errors
8:00AM ET T+3
Resubmission of Errors Due
T+4
Reprocessing of Error Corrections
T+5
Data Ready for Regulators
Access to corrected data

Figure 3: Anticipated timeframes for data error handling and data resubmission

The Bidder must provide a detailed description of how the timeframes described above will be met using the data validation and error correction approach. To illustrate this, a process flow chart must be provided that reflects the timeframe that each aspect of the Bidder's data validation and error correction process will be completed.

2.3 System and Interface Specifications Requirements

The Bidder must perform a detailed analysis of current industry system and interface specifications in order to propose and develop its own format. The specifications must be submitted for review and approval by the NMS Plan Participants. The proposed specifications must address all respective data types collected from the data sources (CAT Reporters) and address all of the requirements outlined in other sections of this RFP. The Bidder must consider the CAT Reporters' adaptability to the proposed specifications, as well as their ability to design, develop, test and integrate with the CAT system in a timely manner.

2.3.1 Communication and Message Protocols

The Bidder must identify the communication and message protocols used for transporting the data. The Bidder may consider the use of known and widely accepted industry protocols. If common industry protocols are inefficient in processing large volumes of data or satisfying other CAT requirements, the Bidder may recommend an alternative protocol implementation. The Bidder must demonstrate advantages of certain message and/or communication protocols in its recommendations. Such protocols must provide reliable data transmission, facilitate recoverability and ensure basic session management. The CAT must support batch submissions furnished via uploaded files. The Bidder must provide facilities for accepting such files as well as provide a reliable feedback mechanism for notification of failures. The Bidder must support manual data entry and correction tools via a secure website.

2.4 Data Validation Requirements

The CAT must ensure data is accurate, timely and complete. The validations required include checking to ensure that data is submitted in the required formats and that lifecycle events can be accurately linked within the established timeframes outlined in Section 2.2.4. Once errors are identified, they must be efficiently and effectively communicated to CAT Reporters. CAT Reporters will be required to correct and resubmit identified errors within the established timeframes.

The initial data checks required to be performed by the CAT include, but are not limited to:

- Data format validation and syntax check
- Data context check
- Identification of unlinked lifecycle events
- Identification of unregistered accounts
- Identification of unregistered market participant identifiers

Specific data validations must be developed by the selected Bidder in conjunction with development of the interface and technical specifications. The objective of the data validation process is to ensure that data is accurate and complete at the time of submission, rather than to identify submission errors at a later time after data has been processed and provided to regulators. To achieve this objective, a comprehensive set of data validations must be developed that addresses both data quality and completeness.

The Bidder will be required to handle data correction and resubmission of the corrected data within the established timeframes outlined in Section 2.2.4 both in a batch process format and via manual Web-based entry.

2.5 Central Repository Requirements

Rule 613 requires the creation and maintenance of a central repository for historical retention and consolidation of all data reported to and any data derived by the system. Rule 613 requires that SRO regulatory staff and the SEC have the ability to access all data, which includes both processed and unprocessed data.

The central repository will store data and make it available to regulators in a convenient and usable standard electronic format that is directly available and searchable electronically without any manual intervention for a period of not less than five years. The data in the central repository will include the original data submitted by the CAT Reporters, data rejected by the system and the rejection reasons, corrected (and resubmitted) data, data accepted by the system and any derivations, summaries (as scheduled or requested by SROs or the SEC) and metadata generated by system.

The solution must allow timely and accurate retrieval of the information by SRO regulatory staff and the SEC.

The data stored in the central repository will be used for market reconstruction analysis, surveillance and regulatory purposes by SRO regulatory staff and the SEC.

2.5.1 Data Types and Sources

This section provides a description of the data that will be captured by the CAT and includes sources and data types to be ingested, validated and processed by the CAT. The selected Bidder will be responsible for developing the detailed data and interface specifications for the CAT data submissions that will be presented to the NMS Plan Participants for approval. The data and interface specifications must be designed to capture all of the data elements required by Rule 613, as well as other information the NMS Plan Participants determine necessary to fully satisfy the objectives of Rule 613, including the potential elimination of reporting systems that the CAT may cause to be unnecessary, such as EBS and OATS.

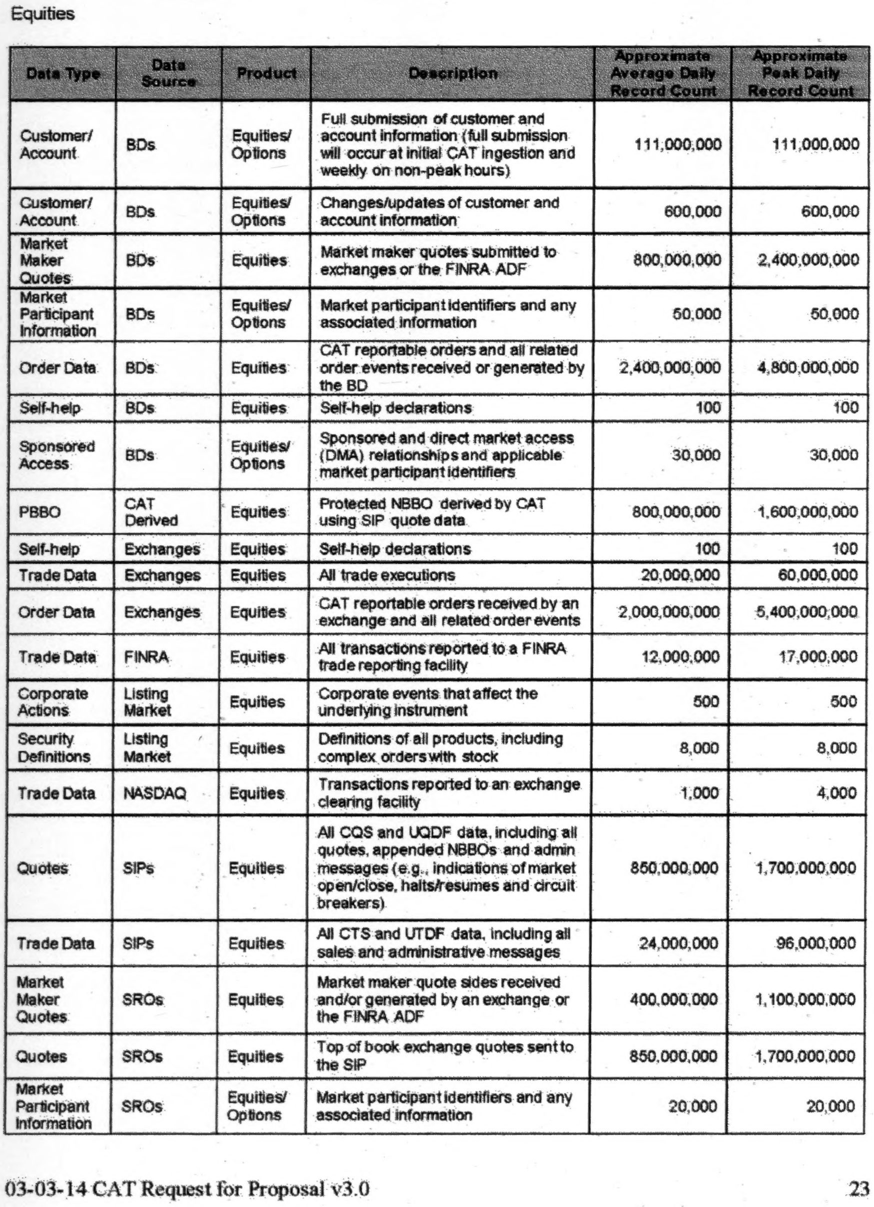
The SROs anticipate that data will be submitted by all CAT Reporters in a uniform electronic data format that will be defined by the CAT. It is possible that more than one format (within practical limits) will be defined to support the various senders throughout the industry.

The following table represents the number of data sources identified by the SROs that are anticipated to submit data to the CAT:

	Number of Sources	
Data Source	**Equities**	**Options**
Exchanges	14	11
TRF	2	0
ADF	1	0
SIPs/OPRA	2	1
OCC	0	1
Broker-dealers	2,000	

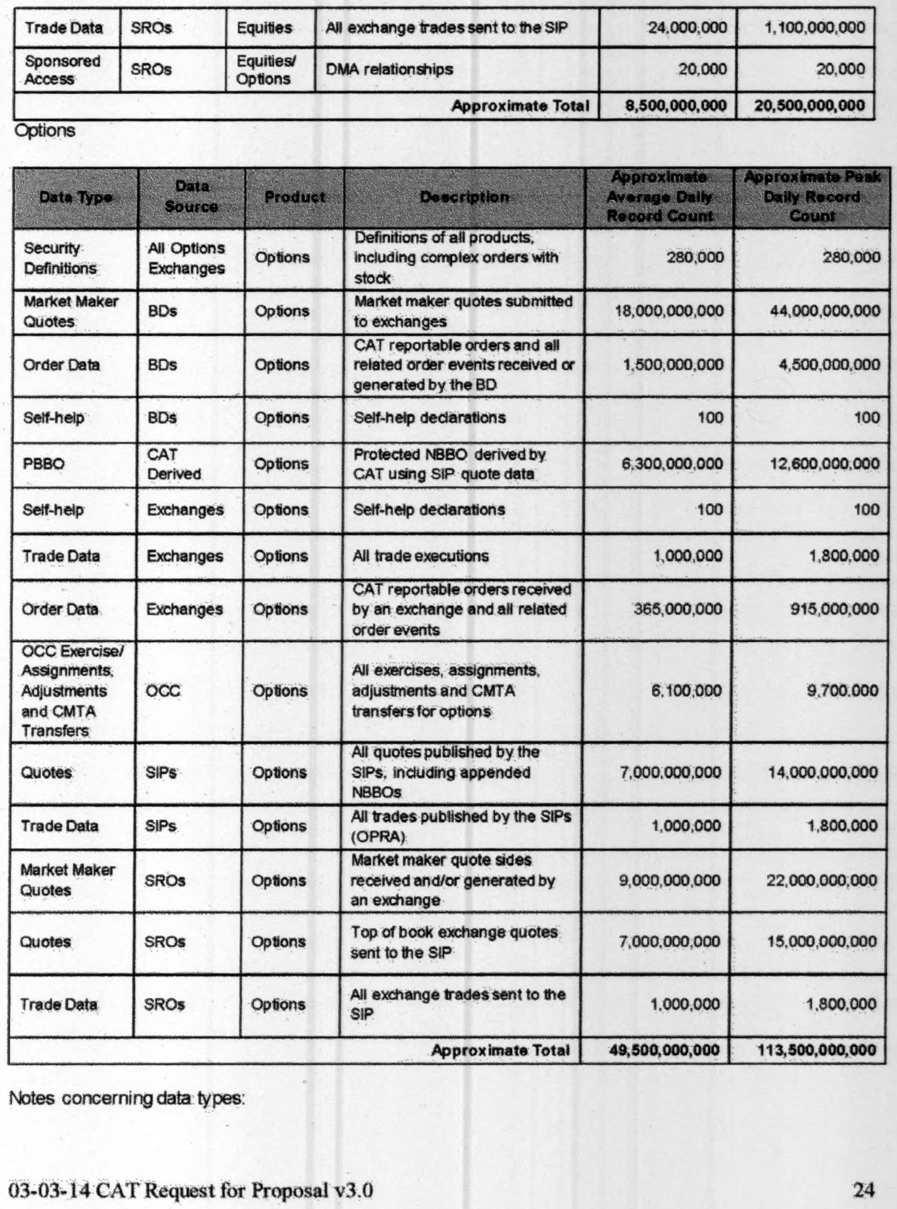
Note: While there are approximately 5,000 broker-dealers, the anticipated number of broker-dealers that will be engaging in CAT-reportable activity (i.e., trading in NMS securities) is approximately 2,000. The SROs anticipate that some broker-dealers will not directly report to the CAT but will rely on other organizations to report on their behalf. However, the CAT will need to have the flexibility to adapt on a timely basis to changes in the number of entities that report information.

The following tables are representative of the data types, the respective sources and expected data counts that are anticipated to be submitted to the CAT.



Equities

Data Type	Data Source	Product	Description	Approximate Average Daily Record Count	Approximate Peak Daily Record Count
Customer/ Account	BDs	Equities/ Options	Full submission of customer and account information (full submission will occur at initial CAT ingestion and weekly on non-peak hours)	111,000,000	111,000,000
Customer/ Account	BDs	Equities/ Options	Changes/updates of customer and account information	600,000	600,000
Market Maker Quotes	BDs	Equities	Market maker quotes submitted to exchanges or the FINRA ADF	800,000,000	2,400,000,000
Market Participant Information	BDs	Equities/ Options	Market participant identifiers and any associated information	50,000	50,000
Order Data	BDs	Equities	CAT reportable orders and all related order events received or generated by the BD	2,400,000,000	4,800,000,000
Self-help	BDs	Equities	Self-help declarations	100	100
Sponsored Access	BDs	Equities/ Options	Sponsored and direct market access (DMA) relationships and applicable market participant identifiers	30,000	30,000
PBBO	CAT Derived	Equities	Protected NBBO derived by CAT using SIP quote data	800,000,000	1,600,000,000
Self-help	Exchanges	Equities	Self-help declarations	100	100
Trade Data	Exchanges	Equities	All trade executions	20,000,000	60,000,000
Order Data	Exchanges	Equities	CAT reportable orders received by an exchange and all related order events	2,000,000,000	5,400,000,000
Trade Data	FINRA	Equities	All transactions reported to a FINRA trade reporting facility	12,000,000	17,000,000
Corporate Actions	Listing Market	Equities	Corporate events that affect the underlying instrument	500	500
Security Definitions	Listing Market	Equities	Definitions of all products, including complex orders with stock	8,000	8,000
Trade Data	NASDAQ	Equities	Transactions reported to an exchange clearing facility	1,000	4,000
Quotes	SIPs	Equities	All CQS and UQDF data, including all quotes, appended NBBOs and admin messages (e.g., indications of market open/close, halts/resumes and circuit breakers)	850,000,000	1,700,000,000
Trade Data	SIPs	Equities	All CTS and UTDF data, including all sales and administrative messages	24,000,000	96,000,000
Market Maker Quotes	SROs	Equities	Market maker quote sides received and/or generated by an exchange or the FINRA ADF	400,000,000	1,100,000,000
Quotes	SROs	Equities	Top of book exchange quotes sent to the SIP	850,000,000	1,700,000,000
Market Participant Information	SROs	Equities/ Options	Market participant identifiers and any associated information	20,000	20,000



Trade Data	SROs	Equities	All exchange trades sent to the SIP	24,000,000	1,100,000,000
Sponsored Access	SROs	Equities/ Options	DMA relationships	20,000	20,000
			Approximate Total	**8,500,000,000**	**20,500,000,000**

Options

Data Type	Data Source	Product	Description	Approximate Average Daily Record Count	Approximate Peak Daily Record Count
Security Definitions	All Options Exchanges	Options	Definitions of all products, including complex orders with stock	280,000	280,000
Market Maker Quotes	BDs	Options	Market maker quotes submitted to exchanges	18,000,000,000	44,000,000,000
Order Data	BDs	Options	CAT reportable orders and all related order events received or generated by the BD	1,500,000,000	4,500,000,000
Self-help	BDs	Options	Self-help declarations	100	100
PBBO	CAT Derived	Options	Protected NBBO derived by CAT using SIP quote data	6,300,000,000	12,600,000,000
Self-help	Exchanges	Options	Self-help declarations	100	100
Trade Data	Exchanges	Options	All trade executions	1,000,000	1,800,000
Order Data	Exchanges	Options	CAT reportable orders received by an exchange and all related order events	365,000,000	915,000,000
OCC Exercise/ Assignments, Adjustments and CMTA Transfers	OCC	Options	All exercises, assignments, adjustments and CMTA transfers for options	6,100,000	9,700,000
Quotes	SIPs	Options	All quotes published by the SIPs, including appended NBBOs	7,000,000,000	14,000,000,000
Trade Data	SIPs	Options	All trades published by the SIPs (OPRA)	1,000,000	1,800,000
Market Maker Quotes	SROs	Options	Market maker quote sides received and/or generated by an exchange	9,000,000,000	22,000,000,000
Quotes	SROs	Options	Top of book exchange quotes sent to the SIP	7,000,000,000	15,000,000,000
Trade Data	SROs	Options	All exchange trades sent to the SIP	1,000,000	1,800,000
			Approximate Total	**49,500,000,000**	**113,500,000,000**

Notes concerning data types:

- Certain data sources, most notably those received from the SIPs and OCC will be received in pre-existing formats defined by those sources. The CAT will need to update its data ingestion processes, and possibly data storage layouts, when these providers update their specifications. The Bidder is encouraged to research the websites of the SIPs for records layouts for their quote and trade transmissions and the website of the OCC for its transmission of exercise/assignments, adjustments and CMTA transfers. These websites will also contain valuable information concerning the maximum message transmission rates possible:
    - CQS and CTS: http://www.nyxdata.com/CTA
    - UQDF and UTDF: http://www.utpplan.com/
    - OPRA: http://www.opradata.com/specs
    - OCC: http://www.optionsclearing.com/

The Bidder should realize that the rates have historically increased with some degree of regularity.

- NBBO versus PBBO: Each of the SIPs provides an NBBO as part of its quote feed. In calculating this NBBO, the SIPs include manual (or unprotected) as well as automatic (or protected) quotes. Manual quotes are not protected for the purposes of Regulation NMS's Order Protection Rule (NMS Rule 611); consequently, exchanges also calculate a version of the NBBO (the PBBO, or Protected NBBO) that excludes manual quotes. The CAT processor will need to calculate and store the PBBO using data contained in the CQS, UQDF and OPRA feeds.
- There is currently no standard for the transmission of self-help messages. Typically, these are communicated via email. The number of self-help messages transmitted will be negligible over time; however, some effort will be required to come up with a standard for capturing these messages in the CAT
- The Bidder should be aware that there will be some fields in order data used to define various order types that will be specific to each SRO. The Bidder must consider how to define this data in standard data transmission layouts. Identification of the specifics of these fields and the values they contain will be a component of the requirements definition phase to occur later in the project

2.5.1.1 Data Feed Management

The CAT must monitor incoming and outgoing feeds and be capable of performing the following functions:

- Managing connectivity of data feeds (e.g., SIPs, broker-dealers and regulators)
- Controlling specific feeds (e.g., start, stop, recovery, retransmission and resynchronization)
- Managing the security of data feeds
- Identifying data transmission failures or errors
- Monitoring capacity utilization and performance optimization
- Identifying latency and communicating latency warnings

2.5.1.2 Issue Symbology

CAT Reporters must submit data to the CAT using the listing exchange symbology format. The CAT must use the listing exchange symbology format in the display of linked data. Issue symbol validation must be included in the processing of data submitted by CAT Reporters.

The CAT must be able to link issue data across any time period so that data can be properly displayed and linked regardless of changes to issue symbols and/or market class. Symbol changes may occur intraday. The Bidder is required to create and maintain a symbol history and mapping table, as well as to provide a tool that will display a complete issue symbol history that will be accessible to CAT Reporters, NMS Plan Participants and the SEC.

2.5.2 Capacity Performance Requirements

When all CAT Reporters are required to submit data to the CAT, the system should be sized to receive, process and load more than 58 billion records or approximately 13 terabytes of data per day. These numbers represent the data table in Section 2.5.1 as well as expected organic growth during the period between Bidder selection and the date of CAT implementation. The number of records is expected to grow approximately 25% annually. It is expected that the central repository will be required to retain data for a period of no less than five years resulting in a central repository growing to more than 21 petabytes of data required for the five years of retention. The system must be designed such that additional capacity can be quickly and seamlessly integrated while maintaining system access and availability requirements. The system must be able to efficiently and effectively handle data ingestion on days with peak data submissions.

	Year 1	Year 2*	Year 3	Year 4	Year 5
Estimated daily data size (TB)	5	13	16	20	24
Accumulated total size of central repository (PB)	2	6	10	15	21

* Note that the large increase in year two reflects the introduction of broker-dealer data submissions.

In order to manage the data volume, operational capacity planning must be conducted on a periodic basis.

2.5.3 Data Retention Requirements

The CAT processor will be required to keep all the data in the central repository online for a rolling five year period. This includes both corrected and uncorrected (or rejected) data. Some of the information, such as stock and options series symbols, used by the market participants may be reused over a period of time. Therefore, the system should store the data received from CAT Reporters and should not overwrite it with new information, creating a five year historical audit trail. Data must be directly available and searchable electronically without any manual intervention.

At a minimum, the system must accommodate an additional two years of data to be archived. It is expected that, on occasion, additional retention of archived data may be requested to support investigations and legal holds.

The overall data archive and storage solutions must meet both the fixed and variable data retention requirements.

2.6 Technical Architecture Requirements

The CAT must be designed and sized to ingest, process and store large volumes of data. The CAT technical infrastructure needs to be scalable, adaptable to new requirements and operable within a rigorous processing and control environment. As a result, the technical infrastructure will require an environment with significant throughput capabilities, advanced data management services and robust processing architecture.

The CAT technology environment must be periodically assessed to evaluate opportunities to accommodate new processing capabilities, lower the cost of operation and improve performance. The technology refresh will need to support established processes, data submission standards and other industry dependencies. The architecture must be scalable to accommodate increases in data volumes, users and SRO workload affecting the system(s).

The solution must provide all necessary infrastructure, network, hardware, components and software required to meet the requirements outlined in the RFP. The Bidder must provide all technology and hosting services including any vendor provided products, internally developed, open source, leveraged, licensed or shared with existing solutions.

This includes, but is not limited to, the following:

- Operating systems
- Hardware
- Storage, database management systems (DBMS) and in-memory databases
- Application/Web server technology
- Programming language(s)
- Hosting/firewall architecture
- Middleware, message queues and the use of clustering or high-availability features
- Other system resources requirements, such as job scheduler and system and security monitoring tools
- Identifying third-party products that will be used in the build and operation of the CAT and providing descriptions and details on how they will be used in the solution

Technical architecture must accommodate and be optimal for supporting the following key system lifecycle elements:

- Scalability to increase capacity to handle a significant increase in the data volume beyond the baseline capacity
- Adaptability to support future technology developments and new requirements
- Maintainability to ensure that technology is kept current, supported and operational

The architecture must address the following requirements:

- Support the necessary system interfaces, including data submission, data access and user interfaces
- Support the necessary throughput, processing timeline and resubmissions requirements
- Complete processing and respond to user queries and data requests as described in this RFP
- Include the necessary redundancy and fault tolerance to protect against soft application or operating system failure (e.g., operational with downgraded response)
- Provide redundancy to support disaster recovery and business continuity requirements as defined in this RFP
- Include necessary solution(s) and clear integration points for CAT Reporters to submit data to the CAT processor
- Support 24x6 hours of operation including any planned system downtime or maintenance windows and start-up time requirements

The architecture will need to accommodate several environments. The build and introduction of the environments may be phased in to align with the implementation milestones:

- Development: build, develop and maintain enhancements and new requirements
- Quality assurance: testing and QA for new software releases, including, but not limited to:
  - Application releases
  - Fixes or patches
  - Operating system upgrades

  - Introductions of new hardware or software components

  QA will need to support unit testing, system integration testing and testing against a production simulated environment

- Production: fully operational environment that supports all CAT receipt, ingestion, processing and storage of CAT data
- Industry testing: an environment to support individual CAT Reporter testing or industry-wide testing against a replica of production data

The architecture and design must be capable of being expanded and modified to accommodate similar types of market and transaction data for other securities. Future products may include non-NMS securities and fixed income.

2.7 Security Requirements

Rule 613 requires that the CAT processor ensure the security and confidentiality of all information reported to and maintained by the CAT in accordance with the policies, procedures and standards in the NMS Plan.

The CAT processor must have appropriate solutions and controls in place to ensure data confidentiality and security during all communication between CAT Reporters and the CAT processor, data extraction, manipulation and transformation, loading to and from the central repository and data maintenance by the system. The solution must also address secure controls for data retrieval and query reports by SRO regulatory staff and the SEC. The solution must provide appropriate tools, logging, auditing and access controls for different components of the system, such as access to the central repository, access for CAT Reporters, access to rejected data, processing status and CAT Reporter calculated error rates.

It is expected that access to PII associated with customers and accounts will have a much lower number of registered users, and access to this data will be limited to SRO regulatory staff and SEC working locations. PII such as customer SSN and tax identifier numbers should not be made available in the query tools, reports or bulk data extraction. Instead, the Bidder must provide for a separate limited access query capability that allows this information to be retrieved only when required by specific SRO regulatory staff and the SEC, including additional security requirements for this sensitive data.

The Bidder must provide a solution addressing physical security controls for corporate, data center and any leased facilities where any of the above data is transmitted or stored.

- The solution should anticipate protection of data during transmission, processing and at rest (stored in the central repository)
- Access to the data must be controlled and system(s) must have a mechanism to confirm the identity of persons (e.g., username/password) who are permitted to access the data; every instance of user access must be logged for auditing purposes
- The system controls should allow for users to be granted different levels of access and capabilities depending on their role or function
- The solution must propose an additional level of security for populating, storing and retrieving sensitive data, such as PII

2.8 Data Access Requirements

The CAT processor must provide and maintain a suite of tools that will allow SRO regulatory staff and the SEC to query the data in the central repository and extract targeted segments of data. In addition, the CAT processor must provide the ability for bulk data extractions and downloading of data to SROs and the SEC so that they may use their own tools for analysis.

The Bidder must provide details of the tools and the interfaces they will provide to SRO regulatory staff and the SEC. The following sub-section outlines the tools the NMS Plan Participants expect to see included in any qualifying bid. For basic search criteria, minimum acceptable response times would be measured in time increments of less than one minute. Complex queries against large sets of data would be expected to take longer, but must generally be available within 24 hours of making the request. The Bidder must describe how it will accommodate multiple simultaneous queries from SRO regulatory staff and the SEC.

It is not anticipated that a standard interface will be built and maintained to access uncorrected data at this time, but uncorrected data must be maintained and be made available to SRO regulatory staff and the SEC upon request.

2.8.1 Online Query Tool Requirements

The solutions provided must allow for targeted queries against data in the central repository across equities and options, both separately and together. All data fields may be included in the result set from targeted queries. Online queries will require a minimum set of criteria, including date and/or time range as well as one or more of the following:

- Symbol(s)
- CAT-Reporter-ID(s)
- Customer ID(s)
- CAT-Order-ID(s)
- Product type (equities or options)
- All orders, quotes, BBOs or trades above or below a certain size within a date and/or time range
- All orders, quotes, BBOs or trades within a range of prices within a date and/or time range
- All orders and/or trades canceled within a specified time range
- All CAT Reporters exceeding specified volume or percentage of volume thresholds in a single symbol or market-wide during a specified period of time

It is anticipated that the solution must support approximately 3,000 registered users, including SRO regulatory staff and SEC staff, authorized to access data representing market activity (excluding the PII associated with customers and accounts). It is anticipated that the solution must be capable of providing access to the data from SRO regulatory staff and SEC working locations and other non-office locations.

2.8.2 Bulk Data Extraction Requirements

The CAT solution must provide for the bulk extraction and download of data, based on a specified date/time range, market, security, Customer ID and the size of the resulting data set. In addition, the CAT processor is required to generate data sets based on market event date to the SROs and the SEC. The solution must provide capabilities to define the logic, frequency, format and distribution method. The CAT must be built with operational controls to control access to make requests and to track all data requests to oversee the bulk usage environment.

The solution must have the capability and capacity to provide bulk data necessary for the SROs and the SEC to run and operate their surveillance processing.

2.9 System Availability, Disaster Recovery and Business Continuity Plans

The Bidder must develop and implement disaster recovery and business continuity plans (BCP) that will meet the specific requirements of the CAT environment. The plan should address the protection of data, service for the data submissions, processing, data access, support functions and operations.

To support the data availability requirements and anticipated volumes, the CAT will require efficient and cost-effective backup and disaster recovery capability that will ensure no loss of data. The Bidder's BCP will need to be inclusive of the technical and business activities of the CAT as outlined in this document. A secondary processing site will need to be capable of recovery and restoration of services at the secondary site within 48 hours of a disaster event. The separate processing sites for disaster recovery and business continuity must adhere to the "Interagency Paper on Sound Practices to Strengthen the Resilience of the U. S. Financial System."[5]

The Bidder must provide a comprehensive disaster recovery and backup plan.

The system must be available, at a minimum, during the period between 12:00 A.M. Eastern Time Monday and 12:00 A.M. Eastern Time Sunday to accept data submissions, corrections, service queries and data requests. The Bidder will describe the expected availability for each of these functions during the hours of operation and, based on the described architecture, indicate the expected reliability of the system.

2.10 Build Project Management

The Bidder will be responsible for providing project management services to manage the initial implementation of the system, including the planning, execution, monitoring and controlling of the analysis, specifications, requirements, infrastructure, testing, change management and solution implementation activities. To ensure the success of the project to build and deploy the system, the Bidder must describe its project management practices, disciplines and deliverables. The Bidder must provide the services and functions outlined in Sections 2.11.1 that are applicable to the build and initial deployment. The Bidder will be required to provide progress reports to the NMS Plan Participants on a regular basis throughout the implementation phase to ensure the CAT service provider is on schedule and on target for providing the required system.

The build project management services will be responsible for the following:

- Documentation of functional and technical requirements
- Prioritization and management of technical and non-technical requirements, modification requests and defect correction
- Development and maintenance of a project plan, project status report and risk and issue logs
- Maintenance and execution of a communication plan with all stakeholders
- Management of scheduled changes
- Identification of teams and resources that will be involved in the various stages of the project
- Capturing and tracking of issues, problems and defects identified during testing
- The initial population of any data (e.g., reference data, customers and accounts)
- The initial coordination and testing of CAT Reporters

The Bidders must provide the following:

- Information on the tools and systems that will be used for managing the project
- Project milestones and completion times relevant to a start date
- Description of project management practices and processes
- Description of the system development methodology and approach that will be used

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[5] SEC Release No. 34-47638; File No. S7-32-02; http://www.sec.gov/news/studies/34-47638.htm

2.11 Operational Requirements

The Bidder must demonstrate operational capabilities to run the CAT that encompass the requirements in the following sub-sections:

2.11.1 Program Management

The Bidder will be responsible for providing program management services to manage ongoing operation and maintenance of the CAT and any enhancement projects to the CAT.

The program management responsibilities will include the following:

- Managing and coordinating tasks between various projects run by the technical and administrative functions, in addition to the resources responsible for maintaining and enhancing the system
- Identifying, managing and tracking of business requirements for new or changed functionalities of the CAT
- Communicating and coordinating priorities and implementation activities for identified changes in requirements
- Managing future changes to business, administrative and technical functions as a result of changes in the requirements of Rule 613
- Seeking approval of changes

2.11.1.1 Project Management

The Bidder will be responsible for providing project management services to manage the CAT processor solution(s) and support the ongoing enhancement, operations and support functions.

Project management responsibilities will include the following:

- Documenting changes to functional and technical requirements
- Prioritizing and managing technical and non-technical requirements, modification requests and defect correction
- Developing and maintaining a project plan, project status report and risk and issue logs
- Maintaining and executing a communication plan with all stakeholders
- Developing and implementing a full incident management program
- Managing scheduled changes
- Identifying, managing and tracking functional requirements for new or changed functionalities of the CAT
- Coordinating change management and program management priorities for the CAT administrative functions and the CAT processor for system upgrades, system testing, integration testing and industry testing
- Producing status reports and performance metrics of project management activities
- Capturing and tracking issues, problems and defects identified during tests
- Assuring continuous process improvements, including root cause analysis and resulting benefits

2.11.1.2 Change Management

The Bidder will be responsible for providing change management services. Changes may include regulatory changes and/or changes initiated by new industry practices and trends that may affect the CAT.

Change management responsibilities will include the following:

- Managing future changes to business, administrative and technical functions as a result of changes in the requirements of Rule 613
- Managing the process to recognize changes in regulatory and business requirements
- Coordinating with project resources
- Communicating and coordinating priorities and implementation activities for identified changes in requirements
- Seeking approval for change management initiatives
- Facilitating appropriate training and education for CAT Reporters and other internal functions to efficiently implement changes
- Coordinating, facilitating and communicating testing events with CAT Reporters and users

2.11.1.3 Industry Testing

The Bidder must conduct industry-wide testing for CAT Reporters, both at initial implementation and on an ongoing basis when there are CAT-related changes or other industry changes that directly affect data and/or reporting. In addition, the CAT must participate in other applicable industry-wide tests conducted by other parties that are relevant to the CAT, such as industry-wide disaster recovery testing.

2.11.1.4 Quality Assurance

QA is a critical part of the CAT solution. Comprehensive QA, risk management and testing practices and standards are key requirements. QA procedures should be applied to all components of the CAT processor and external interfaces and changes.

The Bidder's response should include both the functional and non-functional testing that includes, but is not limited to, the following:

- System testing
- Integration testing
- Regression testing
- Software performance testing
- System performance testing
- Application programming interface (API) testing
- User acceptance testing
- Industry testing
- Interoperability
- Security
- Load and performance testing
- CAT Reporter testing

2.12 Operational Monitoring and Reporting

The Bidder must have a robust operational monitoring program to ensure that the CAT processor and central repository are functioning as intended, system outages and delays are identified and escalated and necessary upgrades and enhancements are promptly identified and implemented.

The Bidder will produce, at a minimum, the following operational and status reports:

- System status reports on a real-time basis
- Processing run times

- Data load status updates
- Daily and historical processing volumes
- Storage utilization and available space
- Processor and memory utilization
- Data access connections and query response times

2.13 CAT Support Functions

The CAT will be required to provide support tools and services to CAT Reporters, SRO regulatory staff and SEC staff. The following sections outline the specific tools and support functions that will be required.

2.13.1 CAT Reporter Support

The Bidder will provide operational and business support to CAT Reporters for all aspects of CAT reporting. A suite of tools must be developed to allow each CAT Reporter to monitor data submissions, identify and correct errors, manage reporting relationships and monitor its compliance with CAT reporting requirements. In addition, communication protocols must be developed to notify CAT Reporters of the CAT system status, outages and other issues that would affect CAT Reporters' ability to submit data.

At a minimum, the following operational and business support tools for CAT Reporters will be required:

- Secure website containing daily reporting statistics for all CAT Reporters, CAT system status, system notifications, system maintenance and system outages reporting relationship management tools and a Web entry mechanism for submitting CAT data and correcting and resubmitting rejections or inaccurate data
- Public website containing comprehensive CAT reporting information, including, but not limited to:
    - Technical specifications
    - Reporting guidance
    - Pending rule changes affecting CAT reporting
    - Software/hardware updates
    - Upgrades and CAT contact information
- Communication mechanisms, such as email messaging and Web announcements, to notify CAT Reporters of system outages, delays and other relevant information that would affect CAT Reporters' ability to submit data and track notifications
- Mechanism for assigning CAT-Reporter-IDs and managing changes to CAT-Reporter-IDs
- CAT Reporter Compliance Report Cards to be created and published on a periodic basis to assist CAT Reporters in monitoring overall compliance with CAT reporting requirements

It is not envisioned that non-SRO CAT Reporters will have access to their data submissions through bulk data exports with the initial implementation of CAT. Only SROs and the SEC will have access to full lifecycle corrected bulk data exports.

2.13.2 CAT User Support

The Bidder will provide operational and business support to CAT users (including SRO regulatory staff and the SEC). A suite of tools must be developed to allow each CAT user to monitor data requests and extractions. In addition, communication protocols must be developed to notify users of the CAT system status, outages and other issues that would affect SRO regulatory staff and the SEC's ability to access, extract and use CAT data. At a minimum, SRO regulatory staff and the SEC should each have access to a secure website where they can monitor data requests and CAT system status, receive and track system notifications and submit data requests.

2.13.3 CAT Help Desk

In addition to the suite of tools described above, the NMS Plan Participants will require that a CAT Help Desk be provided to support both broker-dealers and SRO CAT Reporters. The CAT Help Desk must be able to address business questions and issues, as well as technical questions and issues. The CAT Help Desk must also be able to assist SRO regulatory staff and the SEC with questions and issues regarding obtaining and using CAT data for regulatory purposes.

The SROs will require that the CAT Help Desk be available on a 24x7 basis. The CAT Help Desk must manage large volumes of incoming calls and be able to handle at minimum, 2,500 calls per month. The Bidder must create and maintain a robust electronic tracking system for the CAT Help Desk that must include call logs, incident tracking, issue resolution and volume escalation.

CAT Help Desk support functions must include:

- Setting up new CAT Reporters, including the assignment of CAT-Reporter-IDs, management of CAT entitlements and testing prior to submitting data to CAT
- Managing CAT Reporter authentication and entitlements
- Managing SRO regulatory staff and SEC authentication and entitlements to obtain data for regulatory purposes
- Supporting CAT Reporters with data submissions and data corrections, including submission of customer and account information
- Coordinating and supporting system testing for CAT Reporters to perform individual system tests based on changes to their respective systems
- Responding to questions from CAT Reporters about all aspects of CAT reporting, including reporting requirements, technical data transmission questions, potential changes to Rule 613 that may affect the CAT, software/hardware updates and upgrades, entitlements, reporting relationships and questions about the secure and public websites
- Responding to questions from SRO regulatory staff and the SEC about obtaining and using CAT data for regulatory purposes

2.14 CAT Reporter Compliance

The CAT must include a comprehensive compliance program to monitor CAT Reporters' adherence to Rule 613. This compliance program must be overseen by the CCO, who will have responsibility for reporting on compliance by CAT Reporters to the NMS Plan Participants. The compliance program must cover both broker-dealer and SRO CAT Reporters.

A fundamental component of this program is the requirement to identify on a daily basis all CAT Reporters exceeding the maximum allowable error rate established by the NMS Plan Participants. Once identified, all CAT Reporters exceeding this threshold must be notified that they have exceeded the maximum allowable error rate and be informed of the specific reporting requirements that they did not fully meet (e.g., timeliness, rejections and matching). In addition to daily notification, CAT Reporters must also be notified of ongoing issues that may constitute a pattern and practice of CAT reporting violations over a period of time via periodic CAT Reporter Compliance Report Cards.

The CAT Reporter compliance program must also include reviews to identify CAT Reporters that may have failed to submit order events to CAT, as well as to ensure CAT Reporters correct all identified errors even if such errors do not exceed the maximum allowable error rate.

The CAT will be required to analyze reporting statistics and recommend proposed changes to the maximum allowable error rate established by the NMS Plan Participants. It is expected the maximum allowable error rate will decrease over time as overall compliance rates improve after initial implementation.

The CAT will be required to produce and provide reports and metrics to each SRO on its members' CAT reporting compliance rates so that SROs can monitor their members' compliance with CAT reporting requirements and initiate disciplinary action when appropriate. Further, the CAT must produce and provide reports and metrics to the NMS Plan Participants and potentially the SEC on each SRO CAT Reporter's compliance rates so that the NMS Plan Participants or the SEC may take appropriate action if an SRO fails to comply with its CAT reporting obligations.

The CAT Reporter compliance program must also include:

- Reporting to and interfacing with the NMS Plan Participants
- Providing periodic reports, including relevant metrics, to the NMS Plan Participants that allow them to oversee the quality and integrity of the reporting to the CAT
- Providing ad-hoc customized reports to NMS Plan Participants as requested
- Providing information to the NMS Plan Participants on the performance of individual or multiple CAT Reporters
- Working with the SEC and the NMS Plan Participants to address CAT Reporter deficiencies

2.15 Business Administration Requirements

This section describes the business administration functions that the NMS Plan Participants believe will be necessary to operate the CAT. These functions include the oversight and performance of day-to-day business operations of the CAT, which include ensuring all aspects of the CAT related to processing data or CAT administration operate in a coordinated fashion to ensure the overall cohesiveness and efficiency of the CAT. NMS Plan Participants anticipate that the CAT will be administered by senior professional staff of the selected Bidder under the oversight and guidance of the NMS Plan Participants. The activities of the selected Bidder will also be subject to the involvement and approval of NMS Plan Participants concerning, for example, contracts of a certain dollar amount or of a certain type, personnel decisions regarding senior staff and parameters for engaging offshore vendors.

As a general matter, the Bidder will be responsible for ensuring that the following business administration functions are performed (either by the Bidder itself or by a subcontractor overseen by the Bidder) under the direction and oversight of the NMS Plan Participants:

- Setup, performance and management of the following functions for the CAT:
  - Reporting and oversight
  - Finance
  - Legal
  - General support

High-level overviews of the CAT's business administration functions are provided in the following sub-sections. All of these functions performed will be subject to the general oversight of the NMS Plan Participants, and the Bidder must be prepared to report on these functions to the NMS Plan Participants as requested. Bidders are also invited to identify any additional functional requirements not listed that it believes may be pertinent to the administration or operation of the CAT.

2.15.1 Reporting and Oversight Requirements

The NMS Plan Participants anticipate that they will hold regular meetings as participants in the CAT NMS Plan ultimately approved by the SEC. The selected Bidder will attend these meetings as requested and provide regular reports on the operation and maintenance of the CAT for review by the NMS Plan Participants and the SEC. These reports may include, for example, board-level operational and performance management information on issues such as financial performance and the risk management process of the CAT.

2.15.2 Finance Requirements

The operations of the CAT will require the establishment and maintenance of a finance function for the CAT itself. The SROs are currently considering forming a limited liability company, although this structure is still being explored. The finance functions will include setting up and maintaining the following:

- Accounting (maintaining separate books and records on behalf of the CAT)
- Billing, invoicing, accounts receivable and collections
- Accounts payable (vendor invoice processing and payment and management of vendor activities through coordination with legal and procurement teams)
- Periodic budgeting and forecasting
- Cost allocation among the CAT Reporters and other possible CAT users
- Financial reporting and analysis
- Tax preparation and compliance

2.15.2.1 Billing and Collections Requirements

A process must be established that will allow for the allocation of CAT costs. Further, these costs will need to be billed and collected once allocated. It is anticipated that the SROs will solicit industry feedback on a cost recovery allocation model prior to the filing of the NMS Plan, once more visibility into CAT costs and drivers is obtained from the Bidder in its RFP response.

Related activities may include the following:

- Establish policies and procedures needed to support invoicing, billing, accounts receivable and collections
- Implement related systems and tools with the ability to scale as needed
- Receive and deposit payments and apply remittances to accounts
- Prepare receivables aging and other relevant reports
- Follow up and resolve billing issues
- Collaborate with the NMS Plan Participants on cost allocation methodologies, maintaining agreed upon allocation models and providing related reporting

2.15.2.2 Budgeting and Forecasting Requirements

As part of the finance activities, the CAT will require the development and management of annual operating budgets and periodic forecasts, as well as the achievement of cost containment objectives. Budgets will need to be prepared for review and approval by the NMS Plan Participants.

The Bidder will be required to:

- Implement a budgeting methodology and create processes and allocation models needed to develop annual operating budgets and periodic forecasts

- Provide variance reporting, cost/benefit analyses and financial analytics needed to support decision making and reporting to stakeholders
- Provide recommendations to support ongoing cost containment objectives
- Implement tools and systems to carry out budgeting and forecasting activities
- Document analysis and allocation of costs
- Proactively report to the NMS Plan Participants any anticipated budget shortfalls or other issues

2.15.2.3 Financial Reporting and Accounting Requirements

Financial statements will be a requirement of the CAT NMS Plan to ensure transparency to the costs, revenues and operations of the CAT. Finance will be required to develop, generate and prepare financial statements and reports for the NMS Plan Participants.

The finance activities will include the following:

- Accounting, including establishing and maintaining a general ledger and other subsidiary ledgers as deemed necessary to maintain separate books and records on behalf of the CAT
- Managing the month-end closing process, journal entries and account reconciliations
- Creating and disseminating financial statements and reports on a periodic basis, including a balance sheet, income statement and statement of cash flows, among others
- Providing resources, tools and systems to carry on these functions
- Establishing related financial policies and procedures in order to ensure compliance with accounting principles generally accepted in the United States of America and other statutory reporting requirements
- Establishing internal controls as needed to provide assurance regarding the reliability of financial reporting
- Providing support to external auditors
- Providing reports and financial analyses to the NMS Plan Participants as warranted

2.15.2.4 Tax Filings and other Financial Information Requirements

The CAT will likely be subject to federal, state and local taxation and/or filing requirements. The Bidder will be required to support tax reporting and compliance functions on behalf of the CAT. The NMS Plan Participants reserve the right to hire additional outside tax advisers for the CAT as deemed necessary.

As part of the finance activities, these requirements include:

- Preparing tax returns and maintaining supplemental support as required
- Understanding and documenting tax law requirements by jurisdiction
- Establishing policies and procedures needed to ensure compliance with all applicable tax laws
- Submitting timely filings and payments to tax authorities
- Providing support for and managing tax audits
- Supporting tax planning
- Providing relevant reports to the NMS Plan Participants as warranted

2.15.3 Legal Requirements

From time to time, the CAT may be required to perform legal activities related to the management and operation of the CAT. These activities may include the following:

- Drafting and reviewing of non-disclosure agreements, non-compete agreements and other contracts

- Advising and managing licensing and maintenance agreements (e.g., software and vendor), which includes initiating and drafting the contracts, coordinating with various constituencies and escalating as needed, and working closely with procurement services
- Modifying service level agreements (SLAs) as necessary
- At the direction of the NMS Plan Participants, interacting with the SEC and providing analysis on interpretive issues concerning the CAT

2.15.4 General Support Requirements

2.15.4.1 Procurement Requirements

The CAT may require the acquisition of supplies and professional services in order to operate it in an effective manner. Examples of such procurement activities that may be required of the CAT include:

- Identifying and justifying the need to establish a vendor, supplier or professional services relationship to satisfy the requirements of the CAT
- Gathering information about, interviewing and selecting entities who can potentially satisfy the CAT's requirements for a product or service
- Conducting background reviews and reference checks concerning the quality of the particular product or service and identifying any requirements for follow-up products or services, including installation, maintenance and warranty needs
- Negotiating the price, the availability of customization possibilities and delivery requirements, and executing contracts on that basis, subject to the approval of NMS Plan Participants
- Ensuring contract fulfillment and that the preparation, shipment, delivery and payment of the applicable product or service are completed based on contract terms; installing and training with respect to the use of procured products or services may also be required and performed
- Evaluating the performance of products or services based on the usage, maintenance and any accompanying service support as they are consumed
- Renewing contracts as they expire or when the product or service is to be re-ordered; additional consideration should be given to continuing or changing the existing contractual relationship based on performance or other relevant considerations
- Producing reports for the procurement function such as purchase orders, supplier reports and asset management reports

2.15.4.2 Facilities Management Requirements

The selected Bidder will provide facility management services to support the operation of the CAT, including, for example, the management of office space for the CCO and CAT staff.

2.15.4.3 Audit and Examination Support Requirements

The selected Bidder will be required to support internal and external audits of the operation of the CAT, as well as oversight examinations by the SROs and the SEC. For example, it is anticipated that the CAT will come under the oversight of the SEC's Automation Review Policy (ARP) program. Additionally, the CAT may be subject to a controls review (e.g., Statement on Standards for Attestation Engagements No. 16, *Reporting on Controls at a Service Organization*). It is also possible that an external auditor may be hired by the NMS Plan Participants to conduct periodic audits of the CAT, with which the selected Bidder must fully cooperate.

The Bidder may also be asked to conduct full or partial internal audits of its performance of the functions necessary to operate the CAT.

In support of these audits and examinations, the Bidder's responsibilities could include:

- Drafting responses to questionnaires and participating in interviews and discussions with auditors, SRO staff and SEC staff
- Generating specialized reports and preparing written material for auditors, SRO staff and SEC staff
- Producing data and documents to auditors, SRO staff and SEC staff

3 RFP Response

This section describes the information that must be supplied by the Bidder in response to the CAT RFP. The Bidder must provide a written response to all information and questions that are listed in Section 3. The Bidder must provide requested technical materials, diagrams, customer references and other supporting material as a part of the response. The Bidder must highlight specific experiences and cite examples where applicable, throughout the sections below.

3.1 Executive Summary

In this section of the response, the Bidder must provide a summary of the key aspects of the proposed solution as listed below:

- Short overview of the qualifications of the Bidder
- Solution overview that addresses the technology, business and operational requirements of the CAT
- Overview of the team qualifications
- Identification of subcontractors (if applicable)

3.2 Customer and Account Information Management

3.2.1 Customer and Account Database

The Bidder must address the following with respect to customer information requirements:

(Refer to Section 2.2.2.1 "Customer and Account Database" and Section 2.2.2.2 "Customer ID" for the associated requirements)

1. Describe how customer/account information will be captured, updated and stored with associated detail sufficient to identify each customer
2. Describe how a unique Customer ID across all broker-dealers would be generated and stored for each unique customer captured in the account information database
3. Describe how the solution will support different types of customer and account structures
4. Describe how minor and material customer/account data information inconsistencies across broker-dealers will be handled
5. Describe how PII will be stored
6. Describe how PII access will be controlled and tracked

3.3 Order Lifecycle Assembly

The Bidder must address the following with respect to the order lifecycle assembly requirements:

(Refer to Section 2.2.3 "Order Lifecycle Assembly Requirements" for the associated requirements)

7. Describe how the Bidder will capture a single CAT-Reporter-ID for each CAT Reporter using a CRD number as the key identifier with the option of using LEI. The description should include an explanation of how the Bidder would associate the optional LEI with the required CRD number
8. Describe how the Bidder will capture existing market participant identifiers and associate those with the single CAT-Reporter-ID (i.e., CRD or LEI) for each CAT Reporter. The description should include how

the Bidder will validate identifiers during the data ingestion process and incorporate CAT-Reporter-ID and existing market participant identifiers in the lifecycle linkage process

9. Describe how using the daisy chain approach will link all events in the lifecycle of each order and store the linkages so that targeted queries and comprehensive data scans can be run starting with executed trades and be quickly and efficiently summarized by Customer ID or account number, and alternatively can be run starting with the initial receipt or origination of an order and be quickly linked to the ultimate execution, allocation or cancellation
10. Describe how a single CAT-Order-ID will be created and associated with each individual order event, regardless of the number of CAT Reporters involved in the lifecycle of the order or the number of different order identifiers assigned to individual events by each CAT Reporter involved in the order during its lifecycle. If the Bidder has an alternative to the daisy chain approach, the same detailed description describing how a single CAT-Order-ID will be created must be provided in addition to the daisy chain description so that the SROs may evaluate the merits of the alternative approach
11. Describe how a CAT-Order-ID will be assigned, using either the daisy chain approach or an alternative approach recommended by the Bidder and stored in each of the following scenarios for both equities and options:
    - Agency route to another broker-dealer or exchange
    - Riskless principal route to another broker-dealer or exchange capturing within the lifecycle both the customer leg and the street side principal leg
    - Order routed from one exchange through a routing broker-dealer to a second exchange
    - Order worked through an average price account capturing both the individual street side executions and the average price fill to the customer
    - Order aggregated with other orders for further routing and execution capturing both the street side executions for the aggregated order and the fills to each individual customer order
    - Complex order involving one or more options legs and an equity leg, with a linkage between the option and equity legs.
    - Complex order containing more legs than an exchange's order management system can accept, causing the original order to be broken into multiple orders

    If a particular scenario does not apply to either equities or options, provide an explanation. The Bidder should identify and describe examples of any other scenarios the Bidder is aware of, but are not listed above.
12. If an alternative approach to the daisy chain is recommended by the Bidder, address how the approach guarantees a unique link between all related order events without relying on any form of "fuzzy" matching and prevents information leakage
13. Describe how the Bidder will ensure the accurate and efficient time sequencing of all order events within a single CAT Reporter and/or between multiple CAT Reporters

3.4 Data Validation

The Bidder must address the following with respect to the data validation and error handling requirements:

(Refer to Section 2.4 "Data Validation Requirements" for the associated requirements)

14. Describe how data format and context validations for order and quote events submitted by CAT Reporters will be performed and how rejections or errors will be communicated to CAT Reporters
15. Provide a system flow diagram reflecting the overall data format, syntax and context validation process that includes when each type of validation will be completed and errors communicated to CAT Reporters, highlighting any dependencies between the different validations and impacts of such dependencies on providing errors back to CAT Reporters

16. Describe how related order lifecycle events submitted by separate CAT Reporters will be linked and how unlinked events will be identified and communicated to CAT Reporters for correction and resubmission. Include a description of how unlinked records will be provided to CAT Reporters for correction (e.g., specific transmission methods and/or Web-based downloads)
17. Describe how account and customer information submitted by broker-dealers will be validated and how rejections or errors will be communicated to CAT Reporters
18. Describe the mechanisms that will be provided to CAT Reporters for the correction of both market data (i.e., order, quotes and trades) errors, and account and customer data errors. Include a separate description for batch resubmissions and manual Web-based submissions

3.5 Central Repository

The Bidder must address the following with respect to the following central repository requirements:

(Refer to Section 2.5 "Central Repository Requirements" for the associated requirements)

19. Describe the strategy for managing five years of data that must be accessible to SRO regulatory staff and the SEC in a timely and accurate manner. The strategy must provide for the accessibility of both processed and unprocessed data
20. Describe the strategy for archiving an additional two years of data once it is removed from the central repository (after five years). Indicate the estimated annual cost to maintain the archive for each year of archived data. Describe the process for retrieving, storing and accessing archived data
21. Describe the methods for data protection to ensure no data loss, such as backup/recovery and/or replication adequate to protect the repository from both physical and logical loss of data. Include time estimates for the recovery of data, should loss in the primary data store occur
22. Describe how the central repository can be scaled for growth in the following areas:
    - The number of issues accepted by the CAT
    - The types of messages accepted by the CAT
    - The addition of fields stored on individual data records
    - Increases in any data type due to market growth
23. Describe technical interfaces that will enable timely and accurate retrieval of information by SRO regulatory staff and the SEC

3.5.1 Data Feed Management

The Bidder must address the following to meet data feed management requirements:

(Refer to Section 2.5.1.1 "Data Feed Management" for the associated requirements)

24. Describe a capacity management approach for peak periods
25. Describe manual data entry method(s)
26. Describe how the data ingestion infrastructure will support changes to data structures, including the addition of new data types, new data fields, data elements and field values, as well as other technology changes required to support changing market structures and new regulatory requirements on an ongoing basis
27. Describe the methods of managing connectivity covering the following feed types:
    - Exchange and FINRA CAT Reporters
    - Broker-dealers
    - SIPs
    - OCC

- SRO Regulatory staff and the SEC

28. Describe the procedure for the identification issues, escalation process, corrective action and reporting paradigm
29. Describe whether feed management is part of Help Desk case management. If so, describe how it is integrated. If not, describe how feed monitoring would be accomplished
30. Describe severity levels and expected behavior given those severity levels
31. Describe a method to manage health of batch jobs and real time feeds

3.5.2 Issue Symbology

The Bidder must address the following to meet issue symbology requirements:

(Refer to Section 2.5.1.2 "Issue Symbology" for the associated requirements)

32. Describe how issue symbol validations and error corrections will be performed
33. Describe the strategy for tracking and maintaining an accurate history of issue symbol and/or market class changes
34. Provide a description of an issue symbol history tool and how users will access the tool
35. Describe how complex orders at different exchanges using different symbology conventions will be standardized

3.5.3 Capacity Performance

The Bidder must address the strategy and approach for scaling the system for increases in data volumes or data access and provide capacity details of the proposed CAT solution:

(Refer to Section 2.5.2 "Capacity Performance Requirements" for the associated requirements)

36. Describe how the system was sized and the expected processing times
37. Describe the strategy to support the expected increase in data volumes, including what hardware changes or upgrades are anticipated to support the increases in data volumes
38. Describe the expected processing performance of the system, including processing times and the peak volume the system can handle within the processing timeline
39. Describe the performance of the system during simultaneous access
40. Describe the scalability range (describe increments and maximum possible). Include how the system can be scaled up for peak periods and scaled down as needed. Include any applicable lead times to scale the systems
41. Provide estimated costs to add capacity and scale the system
42. Describe the data access response times for various example queries and data requests and how the system will handle concurrent user requests, including any limits of the system. Include details of how the system will respond if any of the limits are exceeded

3.6 System Overview Description

In the following questions, the Bidder will be asked to provide a high-level description of the proposed solution that fulfills the current CAT requirements and addresses the details of the hardware, software, system and data flows.

3.6.1 Technical Architecture

The Bidder must address the following in its response:

(Refer to Section 2.6 "Technical Architecture Requirements" for the associated requirements)

43. Describe the solution's overall technical architecture, which should address:
    - System architecture
    - Application(s)
    - Logical and physical data architecture
44. Describe hardware and software requirements for the proposed solution including the following:
    - Operating systems
    - Hardware
    - Storage, DBMS and in-memory databases
    - Application/Web server technology
    - Programming language(s)
    - Hosting/firewall architecture
    - Middleware, message queues and use of clustering or high-availability features
45. Describe details of where the technology is sourced, including vendors, internally developed, open source, leveraged, licensed or shared with existing solutions
46. Describe other system resources requirements, such as job scheduler, system and security monitoring tools
47. Identify third-party products that will be used in the build and operation and provide descriptions and details of how they will be used in the solution
48. Describe the initial hardware requirements and how the hardware architecture and design address:
    - Scalability to increase capacity to handle a significant increase in the data volume beyond the baseline capacity
    - Adaptability to support future technology developments and new requirements
    - Maintainability to ensure that technology is kept current, supported and operational
49. Describe the system interfaces, including data submission, data access and user interfaces
50. Describe the network architecture and describe how the solution will handle the necessary throughput, processing timeline and resubmissions
51. Describe how the architecture and various components will be used to meet the processing, retention and access requirements and how it can be enhanced and expanded for future capacity and functional capabilities
52. Describe the availability of the solution, that addresses the ability of the system to complete processing and respond to user queries and data requests
53. Describe any planned system downtime or maintenance windows and start-up time requirements
54. Describe the different environments required to support the different system development lifecycles (e.g., development, production, testing and disaster recovery) and sizes and how they are used
55. Describe expected response time for a query, concurrency and supported user load
56. Identify any existing technical architectures or solutions used in the response and any licensing arrangements needed
57. Describe any system redundancy and fault tolerance the proposed architecture includes that protects against soft application or operating system failure (e.g., operational with downgraded response)
58. Describe any hardware, software or network requirements for CAT Reporters to submit data to the CAT processor. If multiple methodologies are supported provide the details for each methodology
59. Describe the proposed messaging and communication protocols used in data submission and retrieval
60. Describe the advantages of the proposed messaging and communication protocols over existing industry standards and how it addresses the following points:
    - Bandwidth and latency
    - Efficient serialization and parsing

- Messaging protocol's extensibility and backward compatibility
- Communication protocol's reliability, recoverability and session management

61. Describe the plan for development of the interfaces for the proposed messaging protocols
62. Describe the process and associated protocols for accepting batch submissions and delivering batch retrievals
63. Describe the process and any associated protocols for supporting manual data submissions
64. Provide architecture diagrams to illustrate the Bidder's platform design

3.6.2 Security

To ensure that proper security and controls are built into the system, the Bidder is required to:

(Refer to Section 2.7 "Security Requirements" for the associated requirements)

65. Describe how the solution protects data during transmission, processing and at rest (i.e., when stored in the central repository)
66. Describe, in detail, the specific security governance/compliance methodologies utilized in the proposed solution
67. Describe how access to the data is controlled and how the system(s) confirms the identity of persons (e.g., username/password), monitors who is permitted to access the data and logs every instance of user access
68. Describe what system controls for users are in place to grant different levels of access depending on their role or function
69. Describe the strategy, tools and techniques and operational and management practices that will be used to maintain security of the system
70. Provide a description of the proposed system controls and operational practices
71. Provide information regarding the organization's security auditing practices, including internal audit, external audit, third-party independent penetration testing and all other forms of audit and testing
72. Describe how security practices may differ across system development lifecycles and environments that support them (e.g., development, testing and production)
73. Describe in detail the data loss prevention program (DLP). Include information pertaining to strategy, tools and techniques and operational and management practices that will be used
74. Describe the process of data classification and how it relates to the DLP architecture and strategy
75. Describe experiences in developing policies and procedures for a robust security environment, including the protection of PII data
76. Describe the use of monitoring and incident handling tools to log and manage the incident handling lifecycle
77. Describe the approach(es) to secure user access, including security features that will prevent unauthorized users from accessing the system. This should include necessary protection on both unauthorized submission of data and access to data
78. Describe the processes/procedures followed if security is breached
79. Describe the infrastructure security architecture, including network, firewalls, authentication, encryption and protocols
80. Describe the physical security controls for corporate, data center and leased data center locations

3.6.3 Data Access

The Bidder must address data access tools in the proposed CAT solution:

Online Query Tools:

(Refer to Section 2.8.1 "Online Query Tool Requirements" for the associated requirements)

81. Describe the tools and reports that would be provided to allow for the extraction of data search criteria outlined in Section 2.8.1
82. Describe how the solution will accommodate simultaneous users from SRO regulatory staff and the SEC submitting queries
83. Describe the expected response times for query results, the manner in which simultaneous queries will be managed and the maximum number of concurrent queries and users that can be supported by the system within the described minimum response times
84. Describe the format in which the results of targeted queries will be provided to users (e.g., online, spreadsheet files, .txt files, .csv files and zip files)

Bulk Data Extraction:

(Refer to Section 2.8.2 "Bulk Data Extraction Requirements" for the associated requirements)

85. Describe the methods of data delivery that would be made available to SRO regulatory staff and the SEC
86. Describe any limitations on the size of data that can be delivered at onetime, such as number of days or number of terabytes in a single transmission
87. Describe how simultaneous bulk data requests will be managed to ensure fair and equal access to CAT data by SRO regulatory staff and the SEC

3.7 System Availability, Disaster Recovery and Business Continuity Plans

The Bidder is required to provide system availability, disaster recovery and BCP for the proposed CAT solution. The Bidder must address the following:

(Refer to Section 2.9 "System Availability, Disaster Recovery and Business Continuity Plans" for the associated requirements)

88. Describe a solution for routing the data submission processes and the data retrieval requests to the secondary data processing site
89. Describe how the secondary data processing site will be synchronized
90. Describe its redundant components and interfaces. Indicate how redundancy is achieved and how redundant components and interfaces will be managed
91. Describe its failure detection, operational monitoring and failover processes for an entire site or for individual components
92. Describe the Bidder's BCP for both staff and technology
93. Describe the Bidder's experience and capabilities to develop a robust BCP
94. Provide description of the geographic location(s) of the disaster recovery site

3.8 Build Project Management

The Bidder must address the following to meet the build project management requirements:

(Refer to Section 2.10 "Build Project Management" for the associated requirements)

95. Describe the tools and systems that will be used for managing the project
96. Describe project milestones and completion times relevant to a start date
97. Describe the project check point process
98. Describe project management practices and processes
99. Describe the system development methodology and approach that will be used

100. Describe project milestones and the associated deliverables and provide a high level Gantt chart (monthly) identifying project work streams, work breakdown structures (WBS), dependencies and effort
101. Describe the expected resources that would be applied to the project management function

3.9 Operations

3.9.1 Program Management

The Bidder must provide details of program management practices in the proposed CAT solution:

(Refer to Section 2.11.1 "Program Management" for the associated requirements)

102. Describe the program management strategy and methodology

3.9.1.1 Project Management

The Bidder must provide project management support that will maximize the successful accomplishment of all contract requirements. The Bidder must address project management practices in the proposed CAT solution:

(Refer to Section 2.11.1.1"Project Management" for the associated requirements)

103. Describe the project management methodology
104. Describe information on the tools and systems that will be used for managing the projects
105. Describe project management capability with special reference to large scale software and hardware projects, which may include new facilities, new companies, new personnel, numerous competitive customers and stakeholders including government agencies

3.9.1.2 Change Management

The Bidder must address change management practices in the proposed CAT solution:

(Refer to Section 2.11.1.2"Change Management" for the associated requirements)

106. Describe the change management strategy
107. Describe the experiences in change management processes and methodologies used
108. Describe information on change management tools and include samples if available

3.9.1.3 Industry Testing

The Bidder must address industry testing practices in the proposed CAT solution:

(Refer to Section 2.11.1.3"Industry Testing" for the associated requirements)

109. Describe how the Bidder will coordinate industry-wide tests, including the technology environment where the testing will be conducted, the scope of CAT Reporters to be included in the testing (e.g., all CAT Reporters or subsets of CAT Reporters based on profile information), other data providers that need to participate (e.g., SIPs and OCC) and how the industry-wide test will be communicated to testing participants
110. Describe how testing results will be identified and communicated to testing participants. The description should address how errors identified during testing will be communicated to CAT Reporters (e.g., whether errors identified during testing will be communicated to CAT Reporters in the same manner as in a regular production environment)

3.9.1.4 Quality Assurance

The Bidder must address the QA and testing measures of the proposed CAT solution:

(Refer to Section 2.11.1.4 "Quality Assurance" for the associated requirements)

111. Provide an overview of the QA approach for the CAT
112. Describe QA methods with respect to the following test categories:
    - System testing
    - Integration testing
    - Regression testing
    - Software performance testing
    - System performance testing
    - Application programming interface (API) testing
    - User acceptance testing
    - Interoperability
    - Security
    - Load and performance testing
    - CAT Reporter testing
113. Describe the firm's experience with QA
114. Describe how many QA resources would be assigned to the CAT
115. Describe the labs and facilities that will be used by QA group(s), if applicable
116. Describe how load testing will be accomplished
117. If there is an intention to benchmark QA, describe how this benchmarking would occur
118. Describe whether QA is responsible for source code review and control
119. Describe how QA is involved in the rollout of new hardware and software
120. Describe the metrics that will be used to evaluate the effectiveness of the QA role
121. Describe the resources assigned to QA in terms of people (e.g., numbers of people and skill sets)
122. Provide examples of sample test plans and test scripts

3.9.2 CAT Support Functions

The Bidder must address details of the CAT support functions:

(Refer to Section 2.13 "CAT Support Functions" for the associated requirements)

123. Describe the functions of operations staff that will be in place to monitor CAT operations and technical support on a 24x6 basis
124. Describe the ongoing monitoring of the CAT, including monitoring capacity, thresholds, errors, security access, network infrastructure and other conditions
125. Describe the automation strategy and tools that will be used to analyze the monitoring data to provide meaningful alerts to operations staff
126. Describe procedures that will cover testing and maintaining a disaster recovery plan

3.9.2.1 CAT Reporters and Users Support

The Bidder must address the support functions for CAT Reporters and CAT users in the proposed CAT solution:

(Refer to Sections 2.13.1 "CAT Reporter Support" and 2.13.2 "CAT User Support" for the associated requirements)

127. Describe the design and content of the secure website, including functionality available for both broker-dealers and SROs with respect to daily monitoring of data submissions and reporting and correcting data. The description should include who within the Bidder's organization would be responsible for the development and ongoing maintenance of the website
128. Describe the design and content of the public website, including who within the Bidder's organization would be responsible for the development and ongoing maintenance of the website
129. Describe how the Bidder will communicate with CAT Reporters for all aspects of CAT reporting, including, but not limited to: system outages, delays, software/hardware updates and upgrades, pending rule changes, technical specifications, testing and other issues affecting CAT Reporters' ability to submit data to the CAT
130. Describe how information about CAT Reporters, including contact information, would be managed
131. Describe how CAT Reporter entitlements and reporting relationships would be managed
132. Describe the design and content of the CAT Compliance Report Cards, including the frequency of publication

3.9.2.2 CAT Help Desk

The Bidder must address the CAT Help Desk function in the proposed CAT solution:

(Refer to Section 2.13.3 "CAT Help Desk" for the associated requirements)

133. Describe how the Bidder will staff the CAT Help Desk, including its planned management structure and how many full-time equivalents (FTEs) will be devoted to the Help Desk as well as the skill level of the FTEs and their locations
134. Describe the telecommunications technology that will be used to manage a minimum of 2,500 calls per month on a 24x7 basis
135. Describe how Help Desk staff will be trained to ensure they can efficiently and effectively respond to all inquiries
136. Describe the tools that will be available to Help Desk staff to respond to inquiries from CAT Reporters, SRO regulatory staff and the SEC
137. Provide escalation timetables and escalation procedures for unsolved problems
138. Describe the process for setting up new CAT Reporters, including the assignment of CAT-Reporter-IDs, CAT entitlements and testing prior to submitting data to the CAT
139. Describe the management of CAT Reporter authentication and entitlements
140. Describe the management of SRO regulatory staff and SEC authentication and entitlements to obtain data for regulatory purposes

3.9.3 CAT Compliance Function

The Bidder must address the following with respect to the CAT Reporter compliance requirements:

(Refer to Section 2.14 "CAT Reporter Compliance" for the associated requirements)

141. Describe the approach and methodology that the Bidder will use to monitor the maximum allowable error rate defined in the NMS Plan and to identify and recommend potential future adjustments
142. Describe the process that will be used to calculate the daily error rate, including all of the individual components that will be included in the error rate calculation (e.g., timeliness, rejections and matching)
143. Describe the internal tools and reports that will be developed and used to monitor daily error rates and identify all CAT Reporters exceeding the maximum allowable error rates both daily and for specified periods of time (e.g., monthly or quarterly)
144. Describe the tools and mechanisms that will be used to notify CAT Reporters they have exceeded the maximum allowable error rate both on a daily basis and over a specified period of time

145. Describe the tools and reports that will be provided to CAT Reporters to monitor daily error rates and aggregate error rates over periods of time, including CAT Reporter Compliance Report Cards
146. Describe the tools and mechanisms that will be developed and used to identify CAT Reporters that fail to submit all CAT reportable events
147. Describe the tools and mechanisms that will be developed and used to identify CAT Reporters that fail to correct errors within the established timeframes
148. Describe the tools and reports that will be provided to SROs to monitor their members' compliance with CAT reporting requirements
149. Describe the tools and reports that will be provided to the NMS Plan Participants to monitor the quality and integrity of CAT reporting by all CAT Reporters

3.10 Business Administration

The Bidder must address the administrative practices in the proposed CAT solution:

(Refer to Section 2.15 "Business Administration Requirements" for the associated requirements)

150. Describe the methodologies for setting up, performing and managing the following administrative functions:
    - Reporting and oversight
    - Finance
    - Legal
    - General support

3.10.1 Reporting and Oversight

The Bidder must address the following reporting and oversight activities:

(Refer to Section 2.15.1 "Reporting and Oversight Requirements" for the associated requirements)

151. Describe the methodologies for providing and producing reports on the operation and maintenance of the CAT solution. Reports may include items such as board-level operational and performance management information on issues such as financial performance and risk management

3.10.2 Finance

The Bidder must address the following with respect to the finance requirements:

(Refer to Section 2.15.2 "Finance Requirements" and sub-sections under Section 2.15.2 for the associated requirements)

152. Describe how the solution meets the CAT requirements, which should include a minimum of the following:
    - Overall design of finance functions to support the CAT
    - Systems and tools to be utilized
    - Staffing and qualifications of key personnel that will be responsible for this function
    - Key policies and procedures expected to be implemented
    - Internal financial controls strategy
    - Prior firm experience managing this function
    - Reporting capabilities
    - Expected service levels
    - Scalability of proposed solution

- How tax compliance will be assured

3.10.3 Legal

The Bidder must address details of the legal framework of the CAT:

(Refer to Section 2.15.3 "Legal Requirements" for the associated requirements)

153. Describe which legal agreement/framework is recommended. This includes the identification of legal work that will be conducted in-house and legal work for which outside counsel will be brought in

Contracts and legal agreements with CAT Reporters and others:

154. Describe the Bidder's experience advising and managing licensing and maintenance agreements
155. Provide a sample contract/agreement if possible. If different agreements would be used for different types of participants, provide an example of each type. Agreements include, but are not limited to:
    - Non-disclosure agreements
    - Non-compete agreements
    - Intellectual property (IP) agreements
    - Software licensing agreements
    - SLAs
156. Describe the provisions that will be included in such agreements to ensure to the satisfaction of users of the CAT that transaction data will only be capable of being accessed or used by employees of the CAT itself (as distinct from any parent company or affiliate), NMS Plan Participants and the SEC, and that under no circumstances may any transaction data be sold to another party by either the CAT itself or any affiliate of the CAT operator
157. Describe the proposed information barrier that would exist for the CAT transaction data to ensure that CAT data would not be improperly shared with any party not entitled to receive such data

Experience reporting and responding to legal, regulatory and interpretative issues involving regulatory requirements to regulatory oversight boards and the SEC:

158. Describe the Bidder's experience reporting to regulatory oversight bodies, including regulatory oversight boards (the Bidder will be required to regularly report to oversight bodies, including the NMS Plan Participants)
159. Describe the Bidder's experience regarding interactions with the SEC in addressing interpretive and regulatory issues

3.10.4 General Support Functions

3.10.4.1 Procurement

The Bidder is required to address the following details with respect to procurement requirements:

(Refer to Section 2.15.4.1 "Procurement Requirements" for the associated requirements)

160. Describe the methods for conducting background reviews and reference checks concerning the quality of the particular product or service
161. Describe the methodologies for price negotiation, delivery requirements and contract execution (subject to approval from the NMS Plan Participants)
162. Describe the methodologies for ensuring contract fulfillment
163. Describe the process to renew contracts as they expire or when the product or service is to be re-ordered

3.10.4.2 Facilities Management

The Bidder is required to address the following to meet the facilities management requirements:

(Refer to Section 2.15.4.2 "Facilities Management Requirements" for the associated requirements)

164. Describe the methodologies to maintain the facilities to support the operation of the CAT solution

3.10.4.3 Audit and Examination Support

The Bidder is required to address the following details to meet the audit and examination support requirements:

(Refer to Section 2.15.4.3 "Audit and Examination Support Requirements" for the associated requirements)

165. Describe the methods for responding to questionnaires and participating in interviews and discussions with auditors, SRO staff and SEC staff
166. Describe the preparation process for providing written material to auditors, SRO staff and SEC staff

3.11 Company Information

This section provides an overview of the Bidder information that the SROs will consider when evaluating the RFP responses. The company information will be broken into several sections to provide specific areas of focus. The Bidder will be required to supply information about its areas of focus, industry expertise, hiring and management of talent and the processes and methodologies used to deliver services.

3.11.1 Company Profile

The Bidder must include details of current and past experiences of the company, including an overview of the operating structure, years in operation, experience within the securities industry and with projects similar to the scope and scale of the CAT solution and the typical services and clients to which the company has provided its services.

The Bidder must include additional relevant information that supports the company's previous and present day experiences:

167. Describe the legal entity or entities that will be providing the services, including details of relevant jurisdictions of incorporation
168. Describe the company's ownership structure (privately held or publicly owned)
169. Describe the total years of business operations and when the entity was established. If the Bidder intends to establish a separate entity to operate the CAT, indicate the equivalent information for the parent company or companies
170. Provide a summary of the parent company's ownership structures, including affiliates and details of relevant jurisdictions of incorporation, etc.
171. Describe the business purpose of the company and the organization responding to the RFP

3.11.2 Experience and Skills

The Bidder must provide a summary of the company's experience and skills in the securities industry. The following details should be addressed, in addition to any other relevant information that will highlight past experience and skills:

172. Describe details regarding the company's past experience within the securities industry, including relevant projects and/or engagements. Identify any such projects that are similar in the size and scope of the CAT
173. Describe any other experience the Bidder believes is relevant to its response
174. Describe examples of the Bidder's existing technologies and capabilities on such projects

3.11.3 Company Financial Information

The Bidder must provide details of the company's financials that demonstrates the viability and stability of the company to build and operate the CAT technical infrastructure and operations. Relevant information that supports the financial viability of the company must be provided.

175. Provide two years of audited financials, including, but not limited to, balance sheets, cash flows and income statements
176. Provide the credit rating of the company over the last two fiscal years
177. Describe any extraordinary financial obligations that the company is committed to over the next three years that might affect its ability to perform
178. List any anticipated regulatory or business changes that may positively or negatively affect the financial condition of the company

3.11.4 Client Overview

Provide an overview of the Bidder's clients and market focus, as well as any other relevant information as described below:

179. Identify high profile clients
180. Describe types of clients and the typical sizes of engagements
181. Describe typical services provided to the clients
182. Provide three client references for the services provided

3.11.5 Staffing

This section highlights the company's approach to hiring, training and retention, as well as to staffing the CAT activities.

3.11.5.1 Onboarding and Training

The Bidder must address the policies and processes to hire, onboard and train company staff.

183. Provide details regarding the various criteria considered while recruiting/hiring professionals. The details must include the following information, in addition to any other relevant points:
    - Procedures and criteria for background checks of employees
    - Details of drug testing the company performs
    - Details of current process for fingerprinting employees
    - The approximate timeframe involved in hiring and onboarding of professionals
184. Provide detailed descriptions of the training program to ensure employees maintain current technical and industry knowledge

3.11.5.2 Staffing Organizational Chart

The Bidder must provide an overview of the staffing model, skill sets and an organizational chart that describes the team structure, roles and responsibilities in the execution of the build, operations and administration. In addition, the Bidder must provide detailed biographies of the anticipated key staff of the engagement

3.11.5.3 Staffing

185. Specify the resources, including job title, job description and number of FTEs, that are being proposed to staff the CAT by completing the table below. This should include all staff required by the Bidder to meet the requirements for providing all CAT-related services. For example, this should include operations, support, development, engineering, project management and process support staff
186. Provide a job description for each job title. The job description should include principal job responsibilities, skills, job experience and education required for the job

Job Title	Job Description	No. of FTEs	Location

3.11.6 Subcontractors

Address details of all vendor relationships that the Bidder will directly or indirectly use to deliver the functions contained in the RFP.

187. Provide a list of third-party products and subcontractors that are material to the delivery of the functions contained in the RFP
188. Describe the relationship with each subcontractor, including a description of the role of the subcontractor
189. Describe how the company will manage the subcontractors

3.11.7 Offshoring

The Bidder must provide details of the proposed offshoring operating models and capabilities. The Bidder must also provide details and supporting evidence to illustrate the processes and controls that the company has taken to remain in compliance with applicable SEC and other regulatory requirements. Information must include the following details and all other relevant information to describe the current and future state of offshoring models:

190. Describe any affiliates or subsidiaries the Bidder intends to leverage to deliver the functions contained in the RFP
191. Describe any offshore services the Bidder intends to use to deliver the functions contained in the RFP, including process and communication protocols between the onshore and offshore staff. Describe the measures that will be taken to ensure the safety of IP and data

3.12 Contracts and Terms

This section provides an overview of contractual and commercial terms for which the Bidder must provide information, as well as an overview of service level terms on which the Bidder must provide information. The information will be broken into several sections to provide specific areas of focus.

3.12.1 Contractual Proposal

The Bidder must provide information regarding the contractual arrangement proposed for the provision of CAT services. The Bidder must consider an initial contract term of five years, followed by renewal options of three years. The Bidder must be as specific as possible and include all contractual terms that are material for the Bidder, including clauses that contemplate the partial or full termination of the contractual relationship with the CAT. The Bidder must:

192. Provide a draft contract with the material terms and conditions that the organization proposes to use if selected as the CAT service provider
193. Specify the scenarios and financial terms that the Bidder will include in the contract relating to partial and full termination of services (e.g., negligence or no payment)
194. Provide a description of the financial terms of the proposed penalty clause

Contractual arrangements are subject to negotiations. Further guidance will be issued during the selection process, (e.g., penalty clauses that the Bidder will be subjected to in the event that system, operational and/or administration SLAs are not met).

The SROs expect to retain ownership of all IP contributed by them to the CAT processor in connection with CAT services and to own all IP developed on behalf of the CAT or otherwise in connection with the provision of CAT services. The SROs also expect to receive a royalty-free license to use, modify and sublicense (in connection with the CAT) any pre-existing IP that the CAT processor uses to provide the services. Alternative IP ownership and licensing proposals may be considered, with consideration given to costs, benefits and risks of such alternate proposals.

195. Where relevant, the Bidder must provide details of any alternative IP ownership and licensing proposals, as well as the Bidder's assessment of such cost, benefit and risk considerations.

3.12.2 Commercial Terms

As part of the response to this RFP, the Bidder must provide a schedule of the anticipated total cost of ownership of building, operating and maintaining the CAT that will be passed through to the CAT. The Bidder must complete the Cost Schedule provided in Appendix II and provide cost information for the five year period following the award of the contract.

The Bidder estimates must be broken down by the technical, operational and administration costs it anticipates to incur to develop, deploy, operate and maintain the CAT services described in this document. The Bidder must provide as much transparency as possible for the one-time cost for the build and deployment period, populating the items listed in the schedule. The Bidder must provide total technology, operations and administration costs for the operation and maintenance efforts, as appropriate.

Where further transparency is required, the Bidder must provide additional information on its cost estimates and underlying assumptions as part of the CAT selection process.

All costs should be quoted in U.S. dollars. Note that the Bidder must:

196. Provide a description of the pricing methodology used to price the CAT
197. Provide any onetime startup costs required by the Bidder to set up, develop and/or deploy the necessary technical, operational or business administration capabilities to provide CAT services, if any
198. Provide the annual recurring costs associated with providing CAT services for each line item in the Cost Schedule provided in Appendix II. For each line item, the Bidder must estimate the following:
    - Number of FTEs
    - FTE costs
    - Hardware/infrastructure costs
    - Software costs

- Other costs (e.g., real estate costs) not included above

199. Specify any additional material costs that will be passed through to the CAT under Section 4, "Other Material Costs," of the Cost Schedule
200. Specify key assumptions used to drive the Bidder's Cost Schedule to provide further insights into the solution, if not included elsewhere as part of the response
201. As requested, provide additional cost information as part of the CAT selection process in order to compare the costs associated with enhancement work that might be required to address future functionality requirements of the CAT

3.12.3 Conflict of Interest

The Bidder must disclose any interest or relationship that it has with any broker-dealer, entity, person or SRO that may be an apparent or actual a conflict of interest to the Bidder's ability to fulfill its obligations as CAT processor. For each such interest or relationship, the Bidder shall provide a written statement indicating the steps it has taken, or will take, to mitigate this apparent or actual conflict, prior to assuming the role of CAT processor.

4 Definitions

Alternative Display Facility (ADF): An SRO display-only facility operated by FINRA, the ADF provides members with a facility for the display of quotations, the reporting of trades and the comparison of trades

BD: Broker-dealer

CAT Reportable Event: CAT reportable events include, but are not limited to, new orders, quotes, modifications, cancels, order transmittals and executions

CAT Reporter: A national securities exchange, national securities association or a member of a national securities exchange or a national securities association

CAT-Order-ID: A unique order identifier or series of unique order identifiers that allows the central repository to efficiently and accurately link all reportable events for an order and all orders that result from the aggregation or disaggregation of such an order

CAT-Reporter-ID: With respect to each national securities exchange, national securities association and member of a national securities exchange or national securities association, a code that uniquely and consistently identifies such person for purposes of providing data to the central repository

CMTA: Clearing Member Trade Agreement

CQS: Consolidated Quote System

CRD: FINRA operates the Central Registration Depository, the central licensing and registration system for the U.S. securities industry and its regulators

CTS: Consolidated Trade System

Customer: The account holder(s) of the account at a registered broker-dealer originating the order and any person from whom the broker-dealer is authorized to accept trading instructions for such an account, if different from the account holder(s); for purposes of compliance with Rule 613, a customer is not a broker-dealer

Customer Account Information: Customer account information shall include, but not be limited to, account number, account type, customer type, date account opened and large trader identifier (if applicable)

Customer ID: A code that uniquely and consistently identifies such customers for purposes of providing data to the central repository

Error Rate: The percentage of reportable events collected by the central repository for which the data reported does not fully and accurately reflect the order event that occurred in the market

NMS Securities: Any security or class of securities for which transaction reports are collected, processed and made available pursuant to an effective transaction reporting plan, or an effective national market system plan for reporting transactions in listed options

OCC: The Options Clearing Corporation

OPRA: The Options Price Reporting Authority provides last sale information and current options quotations from a committee of participants

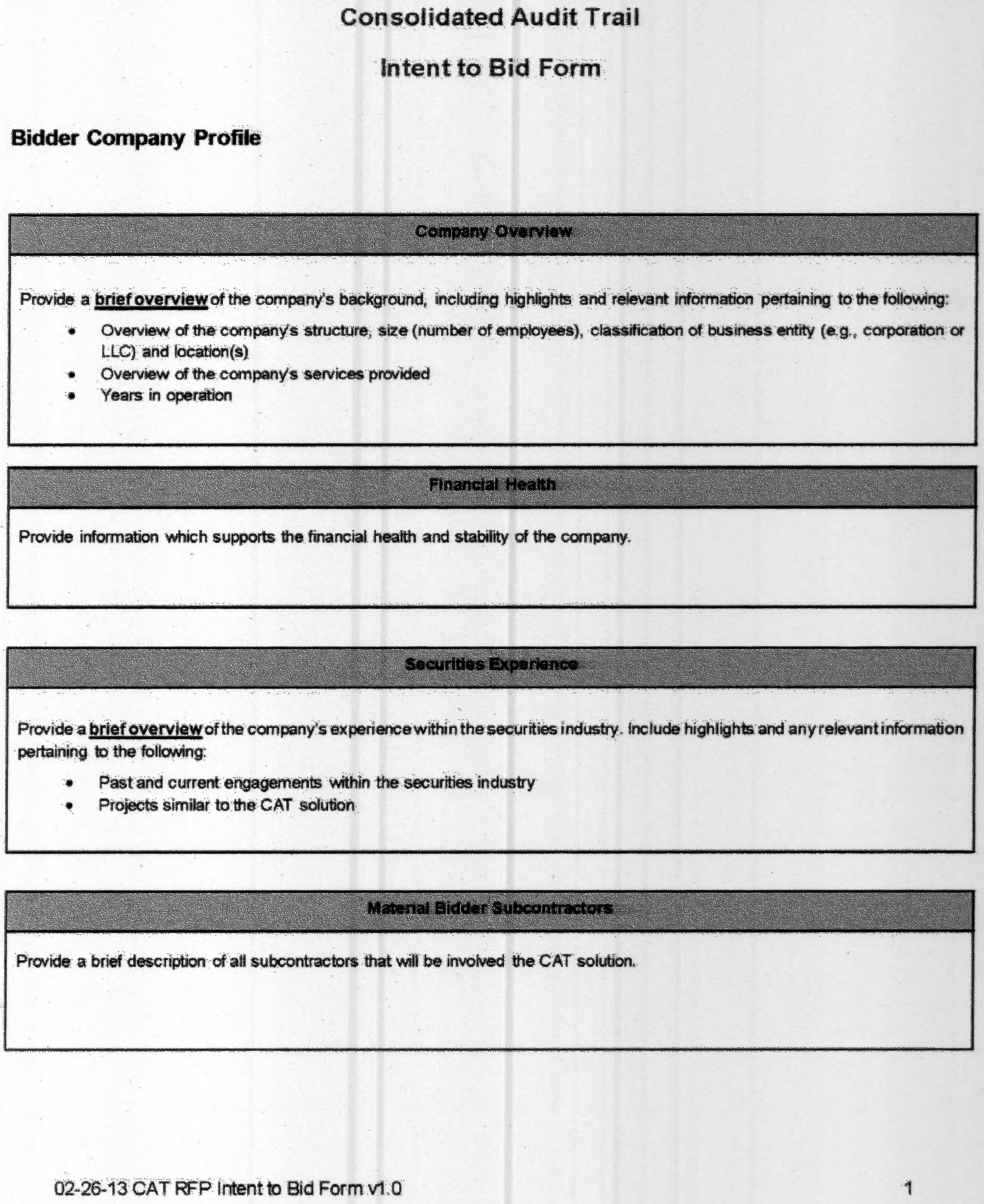
SIP: Securities Information Processor

Trade Reporting Facility (TRF): Transactions in exchange-listed securities effected by FINRA members otherwise than on an exchange are reported to a FINRA TRF. While each FINRA TRF is affiliated with a registered national securities exchange, each FINRA TRF is a FINRA facility and is subject to FINRA's registration as a national securities association

UQDF: UTP Quotation Data Feed

UTDF: UTP Trade Data Feed

5 Appendix I – Intent to Bid



Consolidated Audit Trail

Intent to Bid Form

Bidder Company Profile

Company Overview

Provide a **brief overview** of the company's background, including highlights and relevant information pertaining to the following:

- Overview of the company's structure, size (number of employees), classification of business entity (e.g., corporation or LLC) and location(s)
- Overview of the company's services provided
- Years in operation

Financial Health

Provide information which supports the financial health and stability of the company.

Securities Experience

Provide a **brief overview** of the company's experience within the securities industry. Include highlights and any relevant information pertaining to the following:

- Past and current engagements within the securities industry
- Projects similar to the CAT solution

Material Bidder Subcontractors

Provide a brief description of all subcontractors that will be involved the CAT solution.

6 Appendix II – Cost Schedule

Appendix II: COST SCHEDULE FOR BIDDERS ON THE CAT

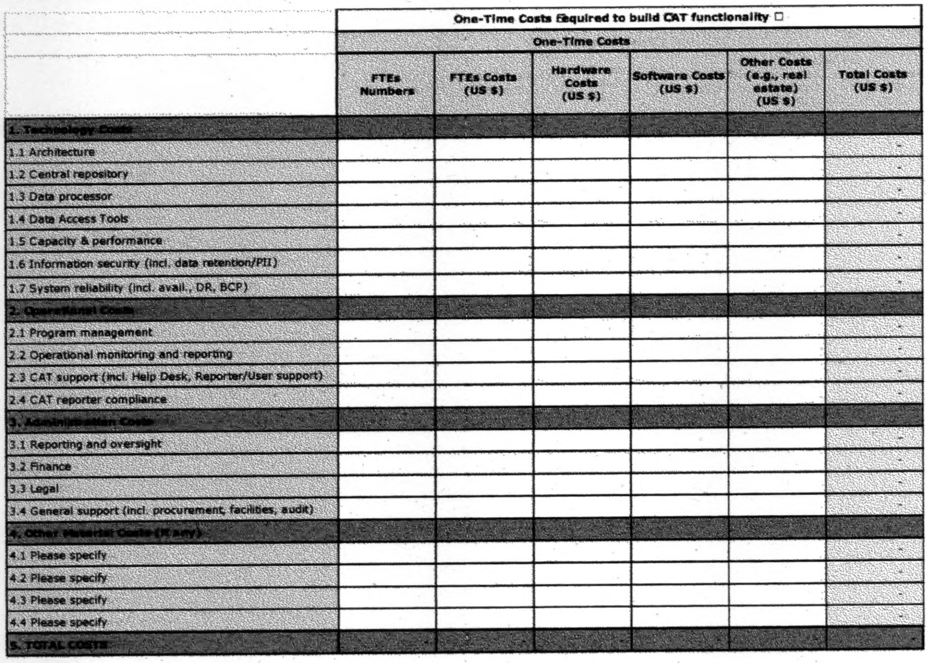
Instructions:

White cells: Bidders must enter material costs that will be passed through to the CAT in all relevant white cells. All figures should be entered in US $.

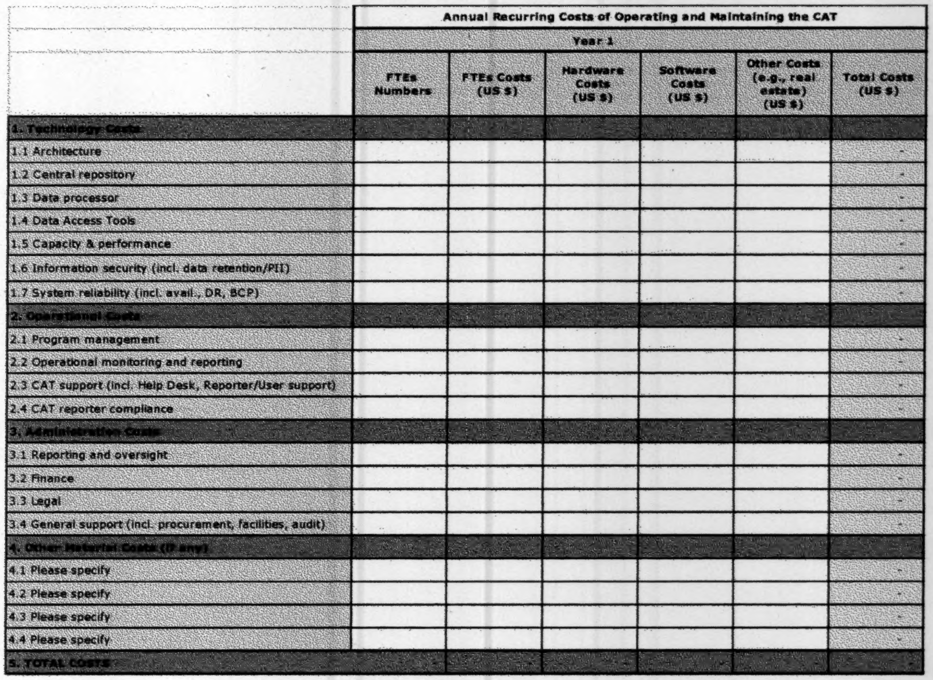
The schedule will automatically calculate all blue cells: total costs for one-time and for the five year period.

One-off Costs: Bidders must provide as much transparency as possible for the one-time cost for the build and deployment period, populating the items listed in the schedule.

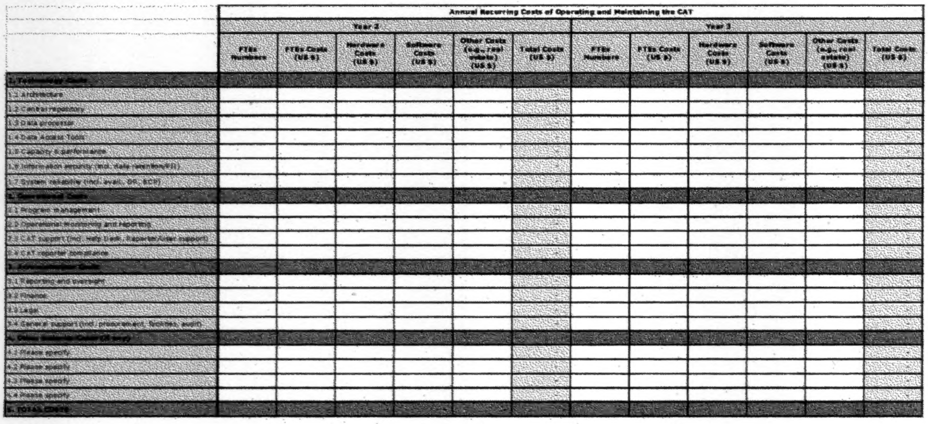
Ongoing costs: Bidders must provide total technology, operation and administrative costs for the operation and maintenance of the CAT, as appropriate.



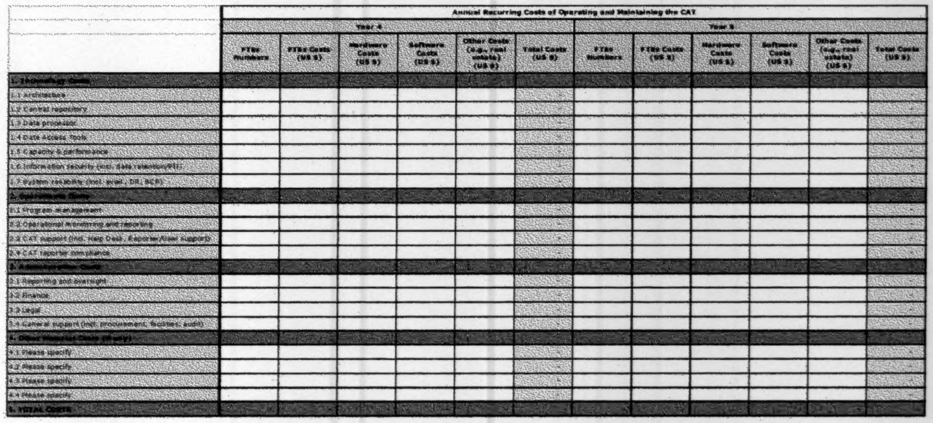
	One-Time Costs Required to build CAT functionality ☐					
	One-Time Costs					
	FTEs Numbers	FTEs Costs (US $)	Hardware Costs (US $)	Software Costs (US $)	Other Costs (e.g., real estate) (US $)	Total Costs (US $)
1. Technology Costs						
1.1 Architecture						-
1.2 Central repository						-
1.3 Data processor						-
1.4 Data Access Tools						-
1.5 Capacity & performance						-
1.6 Information security (incl. data retention/PII)						-
1.7 System reliability (incl. avail., DR, BCP)						-
2. Operational Costs						
2.1 Program management						-
2.2 Operational monitoring and reporting						-
2.3 CAT support (incl. Help Desk, Reporter/User support)						-
2.4 CAT reporter compliance						-
3. Administration Costs						
3.1 Reporting and oversight						-
3.2 Finance						-
3.3 Legal						-
3.4 General support (incl. procurement, facilities, audit)						-
4. Other Material Costs (if any)						
4.1 Please specify						-
4.2 Please specify						-
4.3 Please specify						-
4.4 Please specify						-
5. TOTAL COSTS	-	-	-	-	-	-



	Annual Recurring Costs of Operating and Maintaining the CAT					
	Year 1					
	FTEs Numbers	FTEs Costs (US $)	Hardware Costs (US $)	Software Costs (US $)	Other Costs (e.g., real estate) (US $)	Total Costs (US $)
1. Technology Costs						
1.1 Architecture						-
1.2 Central repository						-
1.3 Data processor						-
1.4 Data Access Tools						-
1.5 Capacity & performance						-
1.6 Information security (incl. data retention/PII)						-
1.7 System reliability (incl. avail., DR, BCP)						-
2. Operational Costs						
2.1 Program management						-
2.2 Operational monitoring and reporting						-
2.3 CAT support (incl. Help Desk, Reporter/User support)						-
2.4 CAT reporter compliance						-
3. Administration Costs						
3.1 Reporting and oversight						-
3.2 Finance						-
3.3 Legal						-
3.4 General support (incl. procurement, facilities, audit)						-
4. Other Material Costs (if any)						
4.1 Please specify						-
4.2 Please specify						-
4.3 Please specify						-
4.4 Please specify						-
5. TOTAL COSTS	-	-	-	-	-	-



	Annual Recurring Costs of Operating and Maintaining the CAT											
	Year 2						Year 3					
	FTEs Numbers	FTEs Costs (US $)	Hardware Costs (US $)	Software Costs (US $)	Other Costs (e.g., real estate) (US $)	Total Costs (US $)	FTEs Numbers	FTEs Costs (US $)	Hardware Costs (US $)	Software Costs (US $)	Other Costs (e.g., real estate) (US $)	Total Costs (US $)
1. Technology Costs												
1.1 Architecture												
1.2 Central repository												
1.3 Data processor												
1.4 Data Access Tools												
1.5 Capacity & performance												
1.6 Information security (incl. data retention/PII)												
1.7 System reliability (incl. avail., DR, BCP)												
2. Operational Costs												
2.1 Program management												
2.2 Operational monitoring and reporting												
2.3 CAT support (incl. Help Desk, Reporter/User support)												
2.4 CAT reporter compliance												
3. Administration Costs												
3.1 Reporting and oversight												
3.2 Finance												
3.3 Legal												
3.4 General support (incl. procurement, facilities, audit)												
4. Other Material Costs (if any)												
4.1 Please specify												
4.2 Please specify												
4.3 Please specify												
4.4 Please specify												
5. TOTAL COSTS												



	Annual Recurring Costs of Operating and Maintaining the CAT											
	Year 4						Year 5					
	FTEs Numbers	FTEs Costs (US $)	Hardware Costs (US $)	Software Costs (US $)	Other Costs (e.g., real estate) (US $)	Total Costs (US $)	FTEs Numbers	FTEs Costs (US $)	Hardware Costs (US $)	Software Costs (US $)	Other Costs (e.g., real estate) (US $)	Total Costs (US $)
1. Technology Costs												
1.1 Architecture						-						-
1.2 Central repository						-						-
1.3 Data processor						-						-
1.4 Data Access Tools						-						-
1.5 Capacity & performance						-						-
1.6 Information security (incl. data retention/PII)						-						-
1.7 System reliability (incl. avail., DR, BCP)						-						-
2. Operational Costs												
2.1 Program management						-						-
2.2 Operational monitoring and reporting						-						-
2.3 CAT support (incl. Help Desk, Reporter/User support)						-						-
2.4 CAT reporter compliance						-						-
3. Administrative Costs												
3.1 Reporting and oversight						-						-
3.2 Finance						-						-
3.3 Legal						-						-
3.4 General support (incl. procurement, facilities, audit)						-						-
4. Other Potential Costs (if any)												
4.1 Please specify						-						-
4.2 Please specify						-						-
4.3 Please specify						-						-
4.4 Please specify						-						-
5. TOTAL COSTS												

Supplement I – Over-the-Counter (OTC) Equities [New as of January 30, 2014]

The SROs have considered the potential benefits of including OTC equities in the CAT and recommend that they be included in the initial phase of the CAT implementation.

The SROs believe that the inclusion of OTC equities will have minimal impact on the CAT implementation timeline, infrastructure and functionality. The inclusion of OTC equities may potentially reduce the amount of resources and costs to CAT Reporters. The SROs believe that including OTC equities could have several potential benefits, including:

- Many firms utilize the same order management and execution systems for both NMS listed securities and OTC equities, as the order and trading data formats for these security types are similar. The inclusion of OTC equities will eliminate the need for firms to filter out OTC equities data when submitting order and execution information to the CAT.
- As previously stated in Section 1.2 of this RFP, it is anticipated that the CAT will have significant overlap with existing regulatory reporting systems, such as EBS and OATS. The inclusion of OTC equities will provide a broader coverage of securities information submitted to the CAT; hence it provides the opportunity to more readily retire OATS and other systems upon full implementation of the CAT. The SROs believe that including OTC equities in the initial phase of the CAT implementation, as well as the regulatory information that such systems require in order to address their respective regulatory needs, will more quickly allow regulators and the securities industry to consider retiring redundant systems.

The inclusion of OTC equities in the CAT is expected to have minimal impact on the data storage requirements that are included in Section 2.5 of this document. The average daily number of transactions in OTC equities is approximately 100,000, while the average daily number of reports submitted to OATS for orders in OTC equities is approximately 3 million. These numbers are very small when compared to the estimated average of 58 billion records that will be submitted to the CAT on a daily basis.

The inclusion of OTC equities should cause minimal changes to Bidders' responses to the RFP, as the data format and order management systems used for OTC equities are similar to NMS stocks. An additional data source will need to be considered, however, as the OTC Reporting Facility (ORF) will provide OTC equities transaction data to the CAT similar to how the FINRA Trade Reporting Facilities do for NMS stocks. The questions in Section 3 of the RFP apply to both NMS stocks and OTC equities – the new requirement to include OTC equities in the first phase of CAT implementation does not affect the information requested from Bidders.

Supplement II – Options Market Maker Quotes [New as of March 3, 2014]

The SROs are considering the potential costs and benefits of the requirement for broker-dealers to report options market maker quotes. As such, the SROs are considering the specific cost impact of eliminating the requirement for broker-dealers to report options market maker quotes. In this scenario, exchanges would submit to the CAT the options market maker quotes sent to them by broker-dealer market makers. The elimination of this requirement may also necessitate the addition of a data field for broker-dealers to report the time market maker quotes were sent to an exchange.

As noted in the "Options" table in Section 2.5.1 of this document, the approximate average daily record count of options market maker quotes submitted by broker-dealers is 18 billion. If the requirement to report such information were eliminated, those records would not need to be collected or stored in the central repository.

The SROs are requesting that the Bidder provide in its RFP response, if possible, two alternative cost models: one that includes the assumption that broker-dealers must report options market maker quotes to the CAT and another that does not. The Bidder is also encouraged to include in its response a discussion of any other impacts elimination of the broker-dealer reporting requirement for options market maker quotes could have.

APPENDIX B

[Reserved]

APPENDIX C

DISCUSSION OF CONSIDERATIONS

SEC RULE 613(a)(1) CONSIDERATIONS

SEC Rule 613(a) requires the Participants to discuss various "considerations" related to how the Participants propose to implement the requirements of the CAT NMS Plan, cost estimates for the proposed solution, and a discussion of the costs and benefits of alternate solutions considered but not proposed.[6] This Appendix C discusses the considerations identified in SEC Rule 613(a). The first section below provides a background of the process the Participants have undertaken to develop and draft the CAT NMS Plan. Section A below addresses the requirements, set forth in SEC Rule 613(a)(1)(i) through (a)(1)(vi), that the "Participants specify and explain the choices they made to meet the requirements specified in [SEC Rule 613] for the [CAT]."[7] In many instances, details of the requirements (i.e., the specific technical requirements that the Plan Processor must meet) will be set forth in the Plan Processor Requirements document ("PPR"). Relevant portions of the PPR are outlined and described throughout this Appendix C, as well as included as Appendix D.

Section B below discusses the requirements in SEC Rule 613(a)(1)(vii) and SEC Rule 613(a)(1)(viii) that the CAT NMS Plan include detailed estimates of the costs, and the impact on competition, efficiency, and capital formation, for creating, implementing, and maintaining the CAT. The information in Section B below is intended to aid the Commission in its economic analysis of the CAT and the CAT NMS Plan.[8]

Section C below, in accordance with SEC Rule 613(a)(1)(x), establishes objective milestones to assess the Participants' progress toward the implementation of the CAT in accordance with the CAT NMS Plan. This section includes a plan to eliminate existing rules and systems (or components thereof) that will be rendered duplicative by the CAT, as required by SEC Rule 613(a)(1)(ix).

Section D below addresses how the Participants solicited the input of their Industry Members and other appropriate parties in designing the CAT NMS Plan as required by SEC Rule 613(a)(1)(xi).

Capitalized terms used and not otherwise defined in this Appendix C have the respective meanings ascribed to such terms in the Agreement to which this Appendix C is attached.

BACKGROUND

SEC Rule 613 requires the Participants to jointly file a national market system plan to govern the creation, implementation, and maintenance of the CAT, and the Central Repository. Early in the process, the Participants concluded that the publication of a request for proposal soliciting Bids from interested parties to serve as the Plan Processor for the CAT was necessary prior to filing the CAT NMS Plan to ensure that potential alternative solutions to creating the CAT could be presented and considered by the Participants and that a detailed and meaningful cost/benefit analysis could be performed, both of which are required considerations to be addressed in the CAT NMS Plan. To that end, the Participants published the RFP on February 26, 2013,[9] and 31 firms formally notified the Participants of their intent to bid.

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[6] Securities Exchange Act Release No. 67457 (July 18, 2012), 77 Fed. Reg. 45722, 45789 (Aug. 1, 2012) ("Adopting Release").

[7] *See* Adopting Release at 45790. Section B below includes discussions of reasonable alternatives to approaching the creation, implementation, and maintenance of the CAT that the Participants considered. *See* SEC Rule 613(a)(1)(xii).

[8] *See* Adopting Release at 45793.

On September 3, 2013, the Participants filed with the Commission the Selection Plan, a national market system plan to govern the process for Participant review of the Bids submitted in response to the RFP, the procedure for evaluating the Bids, and, ultimately, selection of the Plan Processor. Several critical components of the Participants' process for formulating and drafting the CAT NMS Plan were contingent upon approval of the Selection Plan, which occurred on February 21, 2014.[10] Bids in response to the RFP were due four weeks following approval of the Selection Plan, on March 21, 2014. Ten Bids were submitted in response to the RFP.

The Participants considered each Bid in great detail to ensure that the Participants can address the considerations enumerated in SEC Rule 613, including analysis of the costs and benefits of the proposed solution(s), as well as alternative solutions considered but not proposed, so that the Commission and the public will have sufficiently detailed information to carefully consider all aspects of the CAT NMS Plan the Participants ultimately submit. Soon after receiving the Bids, and pursuant to the Selection Plan, the Participants determined that all ten Bids were "qualified" pursuant to the Selection Plan.[11] On July 1, 2014, after the Participants had hosted Bidder presentations to learn additional details regarding the Bids and conducted an analysis and comparison of the Bids, the Participants voted to select six Shortlisted Bidders.

Under the terms of the Selection Plan, and as incorporated into the CAT NMS Plan, the Plan Processor for the CAT has not been selected and will not be selected until after approval of the CAT NMS Plan.[12] Any one of the six remaining Shortlisted Bidders could be selected as the Plan Processor, and because each Shortlisted Bidder has proposed different approaches to various issues, the CAT NMS Plan does not generally mandate specific technical approaches; rather, it mandates specific requirements that the Plan Processor must meet, regardless of approach. Where possible, this Appendix C discusses specific technical requirements the Participants have deemed necessary for the CAT; however, in some instances, provided the Plan Processor meets certain general obligations, the specific approach taken in implementing aspects of the CAT NMS Plan will be dependent upon the Bidder ultimately selected as the Plan Processor.

SEC Rule 613 also includes provisions to facilitate input on the implementation, operation, and administration of the Central Repository from the broker-dealer industry.[13] To this end, the Participants formed a Development Advisory Group ("DAG") to solicit industry feedback.

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[9] The initial RFP was amended in March 2014. *See* Consolidated Audit Trail National Market System Plan Request for Proposal (last updated Mar. 3, 2014), *available at* http://catnmsplan.com/web/groups/catnms/documents/catnms/p213400.zip (the "RFP").

[10] The SEC has approved two amendments to the Selection Plan. *See* Securities Exchange Act Rel. No. 75192 (June 17, 2015), 80 Fed. Reg. 36028 (June 23, 2015); and Securities Exchange Act Rel. No. 75980 (Sept. 24, 2015), 80 Fed. Reg. 58796 (Sept. 30, 2015).

[11] *See* Selection Plan, 78 Fed. Reg. 69910, Ex. A §§ I(Q) (defining "Qualified Bid"), VI(A) (providing the process for determining whether Bids are determined to be "Qualified Bids").

[12] *See* Selection Plan § 6; *see also id.* Article V.

[13] *See* SEC Rules 613(a)(1)(xi) and 613(b)(7).

Following multiple discussions between the Participants and both the DAG and the Bidders, as well as among the Participants themselves, the Participants recognized that some provisions of SEC Rule 613 would not permit certain solutions to be included in the CAT NMS Plan that the Participants determined advisable to effectuate the most efficient and cost-effective CAT. Consequently, the Participants submitted their original Exemptive Request Letter seeking exemptive relief from the Commission with respect to certain provisions of SEC Rule 613 regarding (1) options market maker quotes; (2) Customer-IDs; (3) CAT-Reporter-IDs; (4) linking of executions to specific subaccount allocations on allocation reports; and (5) timestamp granularity for Manual Order Events.[14] Specifically, the Participants requested that the Commission grant an exemption from:

- Rule 613(c)(7)(ii) and (iv) for options market makers with regard to their options quotes.
- Rule 613(c)(7)(i)(A), (c)(7)(iv)(F), (c)(7)(viii)(B) and (c)(8) which relate to the requirements for Customer-IDs.[15]
- Rule 613(c)(7)(i)(C), (c)(7)(ii)(D), (c)(7)(ii)(E), (c)(7)(iii)(D), (c)(7)(iii)(E), (c)(7)(iv)(F), (c)(7)(v)(F), (c)(7)(vi)(B) and (c)(8) which relate to the requirements for CAT-Reporter-IDs.
- Rule 613(c)(7)(vi)(A), which requires CAT Reporters to record and report the account number of any subaccounts to which the execution is allocated.
- The millisecond timestamp granularity requirement in Rule 613(d)(3) for certain Manual Order Events subject to timestamp reporting under Rules 613(c)(7)(i)(E), 613(c)(7)(ii)(C), 613(c)(7)(iii)(C), and 613(c)(7)(iv)(C).

The Participants supplemented their original Exemptive Request Letter with a supplemental Exemptive Request Letter (together, the "Exemptive Request Letters"), clarifying its original requested exemption from the requirement in Rule 613(c)(7)(viii)(B) (including, in some instances, requesting an exemption from the requirement to provide an account number, account type and date account opened under Rule 613(c)(7)(viii)(B)).[16] The Participants believe that the requested relief is critical to the development of a cost-effective approach to the CAT.

The Participants also will seek to comply with their obligations related to the CAT under Reg SCI as efficiently as possible. When it adopted Reg SCI, the Commission expressed its belief that the CAT "will be an SCI system of each SCI SRO that is a member of an approved NMS plan under Rule 613, because it will be a facility of each SCI SRO that is a member of such plan."[17] The Participants intend to work together and with the Plan Processor, in consultation with the Commission, to determine a way to effectively and efficiently meet the requirements of Reg SCI without unnecessarily duplicating efforts.

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[14] *See* original Exemptive Request Letter, *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p602383.pdf.

[15] *See* Participants' Proposed RFP Concepts Document (last updated Jan. 16, 2013) (the "Proposed RFP Concepts Document"). The Proposed RFP Concepts Document was posted on the Consolidated Audit Trail NMS Plan website, http:// catnmsplan.com (the "CAT NMS Plan Website").

[16] *See* Letter from the Participants to Brent J. Fields, Secretary, SEC re: Supplement to Request for Exemptive Relief from Certain Provisions of SEC Rule 613 of Regulation NMS under the Securities Exchange Act of 1934 (Sept. 2, 2015), available at the CAT NMS Plan Website. Separately, on April 3, 2015, the Participants filed with the Commission examples demonstrating how the proposed request for exemptive relief related to allocations would operate; this filing did not substantively update or amend the Exemptive Request Letter. *See* Letter from the Participants to Brent J. Fields, Secretary, SEC re: Supplement to Request for Exemptive Relief from Certain Provisions of SEC Rule 613 of Regulation NMS under the Securities Exchange Act of 1934 (Apr. 3, 2015), available at the CAT NMS Plan Website.

A. Features and Details of the CAT NMS Plan

1. Reporting Data to the CAT

As required by SEC Rule 613(a)(1)(i), this section describes the reporting of data to the Central Repository, including the sources of such data and the manner in which the Central Repository will receive, extract, transform, load, and retain such data. As a general matter, the data reported to the Central Repository is of two distinct types: (1) reference data (e.g., data concerning CAT Reporters and customer information, issue symbology information, and data from the SIPs); and (2) order and trade data submitted by CAT Reporters, including national securities exchanges, national securities associations and broker-dealers. Each of these types of data is discussed separately below.

(a) Sources of Data

In general, data will be reported to the Central Repository by national securities exchanges, national securities associations, broker-dealers, the SIPs for the CQS, CTA, UTP and Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information("OPRA") Plans, and certain other vendors or appropriate third parties ("Data Submitters").[18] Specifically, in accordance with SEC Rule 613(c)(5) and Sections 6.3 and 6.4 of the CAT NMS Plan, each national securities exchange and its members must report to the Central Repository the information required by SEC Rule 613(c)(7) for each NMS Security registered or listed for trading on such exchange or admitted to unlisted trading privileged on such exchange (subject to relief pursuant to the Exemptive Request Letters).[19] Similarly, in accordance with SEC Rule 613(c)(6), each national securities association and its members must report to the Central Repository the information required by SEC Rule 613(c)(7) for each NMS Security for which transaction reports are required to be submitted to the association (subject to relief pursuant to the Exemptive Request Letters). Additionally, the Participants, in consultation with the DAG and with industry support, have determined to include OTC Equity Securities in the initial phase-in of the CAT; thus, CAT

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[17] *See* Securities Exchange Act Release No. 73639 (Nov. 19, 2014), 79 Fed. Reg. 72252, 72275 n. 246 (Dec. 5, 2014) (adopting Reg SCI and citing the Adopting Release at 45774).

[18] *See* Adopting Release at 45748 n.278 (noting that "the Rule does not preclude the NMS plan from allowing broker-dealers to use a third party to report the data required to the central repository on their behalf"). The Participants note that CAT Reporters using third party service providers to submit information on their behalf would still be responsible for all the data submitted on their behalf. The term "CAT Reporters" is generally used to refer to those parties that are required by SEC Rule 613 and the CAT NMS Plan to submit data to the CAT (i.e., national securities exchanges, national securities associations, and members thereof). The term "Data Submitters" includes those third-parties that may submit data to the CAT on behalf of CAT Reporters as well as outside parties that are not required to submit data to the CAT but from which the CAT may receive data (e.g., SIPs). Thus, all CAT Reporters are Data Submitters, but not all Data Submitters are CAT Reporters.

[19] As noted, the Participants submitted the Exemptive Request Letters to facilitate compliance with the goals and purposes of the rule while minimizing the impact on existing market practices and reducing burdens on both Participants and broker-dealers.

Reporters must also include order and trade information regarding orders for OTC Equity Securities in addition to those involving NMS Securities.[20]

In addition to order and execution data, SEC Rule 613 requires Industry Members to report customer information, including Customer-IDs, to the CAT so that order and execution data can be associated with particular Customers. However, in the Exemptive Request Letters, the Participants request relief that would permit CAT Reporters to provide information to the Central Repository using Firm Designated IDs instead of Customer-IDs. In addition, Industry Members are permitted to use Data Submitters that are not national securities exchanges, national securities associations, or members thereof to report the required data to the Central Repository on their behalf. The approach proposed in the Exemptive Request Letters also would permit Data Submitters to provide information to the Central Repository using Firm Designated ID for purposes of reporting information to the CAT.

The Central Repository also is required to collect National Best Bid and National Best Offer information, transaction reports reported to an effective transaction reporting plan filed with the SEC pursuant to SEC Rule 601, and Last Sale Reports reported pursuant to the OPRA Plan.[21] Consequently, the Plan Processor must receive information from the SIPs for those plans and incorporate that information into the CAT. Lastly, as set forth in Appendix D, the Plan Processor must maintain a complete symbology database, including historical symbology. CAT Reporters will submit data to the CAT with the listing exchange symbology format, and the CAT must use the listing exchange symbology format in the display of linked data. The Participants will be responsible for providing the Plan Processor with issue symbol information, and issue symbol validation must be included in the processing of data submitted by CAT Reporters.

After reviewing the Bids and receiving industry input, the Participants do not believe there is a need to dictate that the Plan Processor adopt a particular format for the submission of data to the Central Repository. Rather, regardless of the format(s) adopted, the CAT must be able to monitor incoming and outgoing data feeds and be capable of performing the following functions:

- Support daily files from each CAT Reporter;
- Support files that cover multiple days (for re-transmission);
- Support error correction files;
- Capture operational logs of transmissions, success, failure reasons, etc.; and
- Support real-time and batch feeds.

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[20] *See* SIFMA Industry Recommendations for the Creation of the Consolidated Audit Trail (CAT) at 70 (Mar. 28, 2013) ("SIFMA Recommendations"), *available at* http://www.sifma.org/workarea/downloadasset.aspx?id=8589942773. Section 1.1 of the CAT NMS Plan includes OTC Equity Securities as "Eligible Securities." As discussed in Appendix C, Plan to Eliminate Existing Rules and Systems (SEC Rule 613(a)(1)(ix)), inclusion of OTC Equity Securities in the initial phase of the CAT should facilitate the retirement of FINRA's Order Audit Trail System ("OATS") and reduce costs to the industry.

[21] SEC Rule 613(e)(7).

The Plan Processor will be required to ensure that each CAT Reporter is able to access its submissions for error correction purposes and transmit their data to the Central Repository on a daily basis. The Plan Processer must have a robust file management tool that is commercially available, including key management. In addition, at a minimum, the Plan Processor must be able to accept data from CAT Reporters and other Data Submitters via automated means (e.g., Secure File Transfer Protocol ("SFTP")) as well as manual entry means (e.g., GUI interface).

The Plan Processor will be required to ensure that all file processing stages are handled correctly. This will include the start and stop of data reception, the recovery of data that is transmitted, the retransmission of data from CAT Reporters, and the resynchronization of data after any data loss. At a minimum, this will require the Plan Processor to have logic that identifies duplication of files. If transmission is interrupted, the Plan Processor must specify:

- data recovery process for partial submissions;
- operational logs/reporting;
- operational controls for receipt of data; and
- managing/handling failures.

The Plan Processor is required to establish a method for developing an audit trail of data submitted to and received by the Central Repository. This must include a validation of files to identify file corruption and incomplete transmissions. As discussed more fully below, an acknowledgement of data receipt and information on rejected data must be transmitted to CAT Reporters.

(i) Data Submission for Orders and Reportable Events, including Manual Submission

Sections 6.3 and 6.4 of the CAT NMS Plan require CAT Reporters to provide details for each order and each Reportable Event to the Central Repository.[22] In the RFP, the Participants requested that the Bidders describe the following:

- system interfaces, including data submission, data access and user interfaces;[23]
- the proposed messaging and communication protocol(s) used in data submission and retrieval and the advantage(s) of such protocol(s);[24]
- the process and associated protocols for accepting batch submissions; [25] and
- the process and any associated protocols for supporting manual data submissions.[26]

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[22] *See* SEC Rule 613(c)(7).
[23] RFP Question 49.
[24] RFP Questions 59-60.
[25] RFP Question 62.
[26] RFP Question 63.

(ii) The Timing of Reporting Data

Pursuant to SEC Rule 613(c)(3), Sections 6.3 and 6.4 of the CAT NMS Plan require that CAT Reporters report certain order and transaction information recorded pursuant to SEC Rule 613 or the CAT NMS Plan to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day such information is recorded.[27] SEC Rule 613(c)(3) notes, however, that the CAT NMS Plan "may accommodate voluntary reporting prior to 8:00 a.m. Eastern Time, but shall not impose an earlier deadline on the reporting parties." Sections 6.3 and 6.4 of the CAT NMS Plan explicitly permit, but do not require, CAT Reporters to submit information to the CAT throughout the day. Because of the amount of data that will ultimately be reported to the CAT, the Participants have decided to permit Data Submitters to report data to the CAT as end of day files (submitted by 8:00 a.m. Eastern Time the following Trading Day) or throughout the day. The Participants believe that permitting Data Submitters to report data throughout the day may reduce the total amount of bandwidth used by the Plan Processor to receive data files and will allow CAT Reporters and other Data Submitters to determine which method is most efficient and cost-effective for them. However, the Plan Processor will still be required to have the capacity to handle two times the historical peak daily volume to ensure that, if CAT Reporters choose to submit data on an end-of-day basis, the Plan Processor can handle the influx of data.[28]

(iii) Customer and Customer Account Information

In addition to the submission of order and trade data, broker-dealer CAT Reporters must also submit customer information to the CAT so that the order and trade data can be matched to the specific customer.[29] SEC Rule 613(c)(7) sets forth data recording and reporting requirements that must be included in the CAT NMS Plan. Under SEC Rule 613(c)(7)(i)(A), the CAT NMS Plan must require each CAT Reporter to record and report "Customer-ID(s) for each customer" when reporting to the CAT order receipt or origination information.[30] When reporting the modification or cancellation of an order, the rule further requires the reporting of "the Customer-ID of the Person giving the modification or cancellation instruction."[31] In addition, SEC Rule 613(c)(8) mandates that all CAT Reporters "use the same Customer-ID . . . for each customer and broker-dealer."[32] For purposes of SEC Rule 613, "Customer-ID" means, "with respect to a customer, a code that uniquely identifies such customer for purposes of providing data to the central repository."[33] Also, SEC Rule 613(c)(7)(viii) requires that, for original receipt or origination of an order, CAT Reporters report "customer account information," which is defined as including "account number, account type, customer type, date account opened, and large trader identifier (if applicable)."[34]

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[27] SEC Rule 613 and Sections 6.3 and 6.4 of the CAT NMS Plan permit certain other information to be reported by 8:00 a.m. Eastern Time on the Trading Day following the day the CAT Reporter receives the information. *See* SEC Rule 613(c)(4), (c)(7)(vi)-(viii).

[28] SIFMA's recommendations to the Participants regarding the CAT indicates support for the ability of Data Submitters to submit data in batch or near-real-time reporting. *See* SIFMA Recommendations, at 55.

[29] As noted above, the term "customer" means "(i) [t]he account holder(s) of the account at a broker-dealer originating an order, and (ii) [a]ny person from whom the broker-dealer is authorized to accept trading instructions for such account, if different than the account holder(s)." SEC Rule 613(j)(3).

[30] SEC Rule 613(c)(7)(i)(A).

[31] SEC Rule 613(c)(7)(iv)(F).

[32] SEC Rule 613(c)(8).

[33] SEC Rule 613(j)(5).

[34] SEC Rule 613(j)(4).

After considering the requirements of SEC Rule 613 with respect to recording and reporting Customer-IDs, Customer Account Information, and information of sufficient detail to identify the Customer as well as industry input and the Commission's reasons for adopting these requirements, the Participants requested that Industry Members and other industry participants provide ideas on implementing the Customer-ID requirement. After careful consideration, including numerous discussions with the DAG, the Participants concluded that the CAT NMS Plan should use a reporting model that requires broker-dealers to provide detailed account and Customer information to the Central Repository, including the specific identities of all Customers associated with each account, and have the Central Repository correlate the Customer information across broker-dealers, assign a unique customer identifier to each Customer (i.e., the Customer-ID), and use that unique customer identifier consistently across all CAT Data (hereinafter, the "Customer Information Approach").

Under the Customer Information Approach, the CAT NMS Plan would require each broker-dealer to assign a unique Firm Designated ID to each customer, as that term is defined in SEC Rule 613. For the Firm Designated ID, broker-dealers would be permitted to use an account number or any other identifier defined by the firm, provided each identifier is unique across the firm for each business date (i.e., a single firm may not have multiple separate customers with the same identifier on any given date). Under the Customer Information Approach, broker-dealers must submit an initial set of customer information to the Central Repository, including, as applicable, the Firm Designated ID for the customer, name, address, date of birth, Individual Tax ID ("ITIN")/social security number ("SSN"), individual's role in the account (e.g., primary holder, joint holder, guardian, trustee, person with the power of attorney) and Legal Entity Identifier ("LEI"),[35] and/or Large Trader ID ("LTID"), if applicable.[36] Under the Customer Information Approach, broker-dealers would be required to submit to the Central Repository daily updates for reactivated accounts, newly established or revised Firm Designated IDs, or associated reportable Customer information.[37]

Within the Central Repository, each Customer would be uniquely identified by identifiers or a combination of identifiers such as TIN/SSN, date of birth, and, as applicable, LEI and LTID. The Plan Processor would be required to use these unique identifiers to map orders to specific customers across all broker-dealers. Broker-dealers would therefore be required to report only Firm Designated ID information on each new order submitted to the Central Repository rather than the "Customer-ID" as set forth in SEC Rule 613(c)(7), and the Plan Processor would associate specific customers and their Customer-IDs with individual order events based on the reported Firm Designated ID.

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[35] Where a validated LEI is available for a Customer or entity, it may obviate the need to report other identifier information (e.g., Customer name, address).

[36] The Participants anticipate that Customer information that is initially reported to the CAT could be limited to only customer accounts that have, or are expected to have, CAT-reportable activity. For example, accounts that are considered open, but have not traded Eligible Securities in a given timeframe may not need to be pre-established in the CAT, but rather could be reported as part of daily updates after they have CAT-reportable activity.

[37] Because reporting to the CAT is on an end-of-day basis, intra-day changes to information could be captured as part of the daily updates to the information. *See* SEC Rule 613(c)(3). To ensure the completeness and accuracy of Customer information and associations, in addition to daily updates, broker-dealers would be required to submit periodic full refreshes of Customer information to the CAT. The scope of the "full" Customer information refresh would need to be further defined, with the assistance of the Plan Processor, to determine the extent to which inactive or otherwise terminated accounts would need to be reported.

The Customer-ID approach is strongly supported by the industry as it believes that to do otherwise would interfere with existing business practices and risk leaking proprietary order and customer information into the market.[38] To adopt such an approach, however, requires certain exemptions from the requirements of SEC Rule 613. Therefore, the Participants included the Customer Information Approach in the Exemptive Request Letters so that this approach could be included in the CAT NMS Plan.

In addition to the approach described above, the CAT NMS Plan details a number of requirements which the Plan Processor must meet regarding Customer and Customer Account Information.

The Plan Processor must maintain information of sufficient detail to uniquely and consistently identify each Customer across all CAT Reporters, and associated accounts from each CAT Reporter. The Plan Processor must document and publish, with the approval of the Operating Committee, the minimum list of attributes to be captured to maintain this association.

The CAT Processor must maintain valid Customer and Customer Account Information for each Trading Day and provide a method for Participants and the SEC to easily obtain historical changes to that information (e.g., name changes, address changes).

The CAT Processor will design and implement a robust data validation process for submitted Firm Designated ID, Customer Account Information and Customer Identifying Information.

The Plan Processor must be able to link accounts that move from one CAT Reporter to another due to mergers and acquisitions, divestitures, and other events. Under the approach proposed by the Participants, broker-dealers will initially submit full account lists for all active accounts to the Plan Processor and subsequently submit updates and changes on a daily basis.[39] In addition, the Plan Processor must have a process to periodically receive full account lists to ensure the completeness and accuracy of the account database.

In the RFP, the Participants asked for a description of how Customer and Customer Account Information will be captured, updated and stored with associated detail sufficient to identify each Customer.[40] All Bidders anticipated Customer and Customer Account Information to be captured in an initial download of data. The precise method(s) by which CAT Reporters submit Customer data to the Central Repository will be set out in the Technical Specifications provided by the Plan Processor in accordance with Section 6.9 of the CAT NMS Plan. Data capture would occur using both file-based and entry screen methods. Data validation would check for potential duplicates with error messages being generated for follow-up by CAT Reporters. Data Reporters can update data as needed or on a predetermined schedule.

(iv) Error Reporting

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[38] SIFMA Recommendations at 30-31; Financial Industry Forum (FIF) Consolidated Audit Trail (CAT) Working Group Response to Proposed RFP Concepts Document at 12 (Jan. 18, 2013), *available at* http://catnmsplan.com/industryFeedback/P197808 ("FIF Response").
[39] "Active accounts" are defined as accounts that have had activity within the last six months.
[40] RFP Question 1.

SEC Rule 613(e)(6) requires the prompt correction of errors in data submitted to the Central Repository. As discussed in Appendix C, Time and Method by which CAT Data will be Available to Regulators, initial validation, lifecycle linkages, and communications of errors to CAT Reporters will be required to occur by 12:00 p.m. Eastern Time T+1 and corrected data will be required to be resubmitted to the Central Repository by 8:00 a.m. Eastern Time on T+3. Each of the Bidders indicated that it was able to meet these timeframes.

However, the industry expressed concern that reducing the error repair window will constitute a significant burden to Data Submitters and also question whether the proposed error correction timeframe is possible.[41] Financial Information Forum ("FIF") supports maintaining the current OATS Error Handling timelines, which allows for error correction within five OATS business days from the date of original submission.[42] Securities Industry and Financial Markets Association ("SIFMA") also recommends a five-day window for error correction.[43] Nevertheless, the Participants believe that it is imperative to the utility of the Central Repository that corrected data be available to regulators as soon as possible and recommend the three-day window for corrections to balance the need for regulators to access corrected data in a timely manner while considering the industry's concerns.

(b) The Manner in which the Central Repository will Receive, Extract, Transform, Load, and Retain Data

The Central Repository must receive, extract, transform, load, and retain the data submitted by CAT Reporters and other Data Submitters. In addition, the Plan Processor is responsible for ensuring that the CAT contains all versions of data submitted by a CAT Reporter or other Data Submitter (i.e., the Central Repository must include different versions of the same information, including such things as errors and corrected data).[44]

In the RFP, the Participants requested that each Bidder perform a detailed analysis of current industry systems and interface specifications to propose and develop their own format for collecting data from the various data sources relevant under SEC Rule 613, as outlined in the RFP. Bidders also were requested to perform an analysis on their ability to develop, test and integrate this interface with the CAT.[45] In addition, the Participants sought input from the industry regarding different data submission mechanisms and whether there needs to be a method to allow broker-dealers with very small order volumes to submit their data in a non-automated manner.[46]

As noted above, since the Central Repository is required to collect and transform customer, order and trade information from multiple sources, the RFP requested that Bidders describe:

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[41] FIF Response at 35.

[42] *Id.*

[43] SIFMA Recommendations at 62.

[44] Data retention requirements by the Central Repository are discussed more fully in Appendix D, Functionality of the CAT System.

[45] RFP § 2.3 at 19.

[46] SEC Rule 613: Consolidated Audit Trail (CAT), Questions for Industry Consideration, *available at* http://catnmsplan.com/QuestionsforIndustryConsideration.

- how Customer and Customer Account Information will be captured, updated and stored with associated detail sufficient to identify each customer;[47]
- the system interfaces, including data submission, data access and user interfaces;[48]
- the proposed messaging and communication protocol(s) used in data submission and retrieval and the advantage(s) of such protocol(s);[49]
- the process and associated protocols for accepting batch submissions;[50] and
- the process and any associated protocols for supporting manual data submissions.[51]

Various Bidders proposed multiple methods by which Data Reporters could report information to the Central Repository. Bidders proposed secure VPN, direct line access through TCP/IP or at co-location centers, and web-based manual data entry.

The RFP also requested that Bidders describe:

- the overall technical architecture;[52] and
- the network architecture and describe how the solution will handle the necessary throughput, processing timeline and resubmissions.[53]

There are two general approaches by which the Central Repository could receive information. Approach 1 described a scenario in which broker-dealers would submit relevant data to the Central Repository using their choice of existing industry messaging protocols, such as the Financial Information eXchange ("FIX") protocol. Approach 2 provided a scenario in which broker-dealers would submit relevant data to the Central Repository using a defined or specified format, such as an augmented version of OATS.

Following receipt of data files, the Plan Processor will be required to send an acknowledgement of data received to CAT Reporters and third party Data Submitters. This acknowledgement will enable CAT Reporters to create an audit trail of their data submissions and allow for tracing of data breakdowns if data is not received. The minimum requirements for receipt acknowledgement are detailed in Appendix D, Receipt of Data from Reporters.

Once the Central Repository has received the data from the CAT Reporters, it will extract individual records from the data, and validate the data through a review process that must be described in the Technical Specifications involving context, syntax, and matching validations. The Plan Processor will need to validate data and report back to any CAT Reporter any data that has not passed validation checks according to the requirements in Appendix D, Receipt of Data from Reporters. To ensure the accuracy and integrity of the data in the Central Repository, data that does not pass the basic validation checks performed by the Plan Processor must be rejected until it has been corrected by the CAT Reporter responsible for submitting the data/file. After the Plan Processor has processed the data, it must provide daily statistics regarding the number of records accepted and rejected to each CAT Reporter.

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[47] RFP Question 1.
[48] RFP Question 49.
[49] RFP Questions 59-60.
[50] RFP Question 62.
[51] RFP Question 63.
[52] RFP Question 43.
[53] RFP Question 50.

The Plan Processor also will be required to capture rejected records for each CAT Reporter and make them available to the CAT Reporter. The "rejects" file must be accessible via an electronic file format, and the rejections and daily statistics must also be available via a web interface. The Plan Processor must provide functionality for CAT Reporters to amend records that contain exceptions. The Plan Processor must also support bulk error correction so that rejected records can be resubmitted as a new file with appropriate indicators for rejection repairs. The Plan Processor must, in these instances, reprocess repaired records. In addition, a web GUI must be available for CAT Reporters to make updates, including corrections, to individual records or attributes. The Plan Processor must maintain a detailed audit trail capturing corrections to and replacements of records.

The Plan Processor must provide CAT Reporters with documentation that details how to amend/upload records that fail the required validations, and if a record does not pass basic validations, such as syntax rejections, then it must be rejected and sent back to the CAT Reporter as soon as possible, so it can be repaired and resubmitted.[54] In order for regulators to have access to accurate and complete data as expeditiously as practicable, the Plan Processor will provide CAT Reporters with their error reports as they become available, and daily statistics must be provided after data has been uploaded and validated. The reports will include descriptive details as to why each data record was rejected by the Plan Processor.

In addition, on a monthly basis, the Plan Processor should produce and publish reports detailing CAT Reporter performance and comparison statistics, similar to the report cards published for OATS presently. These reports should include data to enable CAT Reporters to assess their performance in comparison to the rest of their industry peers and to help them assess the risk related to their reporting of transmitted data.

CAT Reporters will report data to the Central Repository either in a uniform electronic format, or in a manner that would allow the Central Repository to convert the data to a uniform electronic format, for consolidation and storage. The Technical Specifications will describe the required format for data reported to the Central Repository. Results of a study conducted of broker-dealers showed average implementation and maintenance costs for use of a new file format to be lower than those for use of an existing file format (e.g., FIX)[55], although an FIF "Response to Proposed RFP Concepts Document" dated January 18, 2013 did indicate a preference among its members for use of the FIX protocol.

As noted above, the specific formats of data submission and loading will depend upon the Bidder chosen as the Plan Processor. Regardless of the ultimate Plan Processor, however, data submitted to the CAT will be loaded into the Central Repository in accordance with procedures that are subject to approval by the Operating Committee.[56] The Central Repository will retain data, including the Raw Data, linked data, and corrected data, for at least six years. Data submitted to the Central Repository, including rejections and corrections, must be stored in repositories designed to hold information based on the classification of the Data Submitter (*e.g.*, whether the Data Submitter is a Participant, a broker-dealer, or a third party Data Submitter). After ingestion by the Central Repository, the Raw Data must be transformed into a format appropriate for data querying and regulatory output.

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[54] The industry supports receiving information on reporting errors as soon as possible to enable CAT Reporters to address errors in a timely manner. *See* FIF Response at 36.

[55] *See* Appendix C, Analysis of Expected Benefits and Estimated Costs for Creating, Implementing, and Maintaining the Consolidated Audit Trail (SEC Rule 613(a)(1)(vii)), for additional details on cost studies.

SEC Rule 613 reflects the fact that the Participants can choose from alternative methods to link order information to create an order lifecycle from origination or receipt to cancellation or execution.[57] After review of the Bids and discussions with Industry Members, the CAT NMS Plan reflects the fact that the Participants have determined that the "daisy chain" approach to CAT-Order-ID that requires linking of order events rather than the repeated transmission of an order ID throughout an order's lifecycle is appropriate. This approach is widely supported by the industry, and using the daisy chain approach should minimize impact on existing OATS reporters, since OATS already uses this type of linking.[58] The RFP asked Bidders to propose any additional alternatives to order lifecycle creation; however, all of the Bidders indicated that they would use the daisy chain approach to link order events.[59]

In the daisy chain approach, a series of unique order identifiers assigned by CAT Reporters to individual order events are linked together by the CAT and assigned a single CAT-generated CAT-Order-ID that is associated with each individual order event and used to create the complete lifecycle of an order. Under this approach, each CAT Reporter generates its own unique order ID but can pass a different identifier as the order is routed to another CAT Reporter, and the CAT will link related order events from all CAT Reporters involved in the life of the order.[60]

The Participants believe that the daisy chain approach can handle anticipated order handling scenarios, including aggregation and disaggregation, and generally apply to both equities and options. The Participants created a subcommittee of DAG members and Participants to walk through multiple complex order-handling scenarios to ensure that the daisy chain approach can handle even the most complex of order handling methods.[61]

Additionally, the daisy chain approach can handle representative order reporting scenarios[62] and order handling scenarios sometimes referred to as "complex orders" that are specific to options and may include an equity component and multiple option components (e.g., buy-write, straddle, strangle, ratio spread, butterfly and qualified contingent transactions). Typically, these orders are referenced by exchange systems on a net credit/debit basis, which can cover between two and twelve different components. Such "complex orders" must also be handled and referenced within the CAT. The Bidder must develop, in close consultation with Industry Members, a linking mechanism that will allow the CAT to link the option leg(s) to the related equity leg or the individual options components to each other in a multi-leg strategy scenario.

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[56] *See* Section 6.1(c) of the CAT NMS Plan.

[57] *See* SEC Rule 613(j)(1).

[58] *See* SIFMA Recommendations at 13, 39-42; FIF Response at 19.

[59] *See* RFP Questions 11 and 12.

[60] A detailed example of the application of the daisy chain approach to an order routed to an exchange on an agency basis can be found in the Proposed RFP Concepts Document at 26.

[61] This subcommittee included 21 Industry Members and 16 Participants. It met 11 times over the course of 13 months to discuss order handling and CAT reporting requirements. Examples of order handling scenarios that must be addressed include, in addition to the agency scenario referenced above: orders handled on a riskless principal basis, orders routed out of a national securities exchange through a broker-dealer router to another national securities exchange, orders executed on an average price basis and orders aggregated for further routing and execution. Detailed examples of these types of scenarios can be found in the Proposed RFP Concepts Document at 27-30.

[62] These scenarios, and how the daisy chain approach could be applied, can be found in the Representative Order Proposal (Feb. 2013), *available at* http://catnmsplan.com/web/idcplg?IdcService=SS_GET_PAGE&ssDocName=P197815.

Once a lifecycle is assembled by the CAT, individual lifecycle events must be stored so that each unique event (e.g., origination, route, execution, modification) can be quickly and easily associated with the originating customer(s) for both targeted queries and comprehensive data scans. For example, an execution on an exchange must be linked to the originating customer(s) regardless of how the order may have been aggregated, disaggregated, and routed through multiple broker-dealers before being sent to the exchange for execution.

The Plan Processor must transform and load the data in a way that provides the Participants with the ability to build and generate targeted queries against data in the Central Repository across product classes submitted to the Central Repository. The Participants' regulatory staff and the SEC must be able to create, adjust, and save ad-hoc queries to provide data to the regulators that can then be used for their market surveillance purposes. All data fields may be included in the result set from targeted queries. Because of the size of the Central Repository and its use by multiple parties simultaneously, online queries will require a minimum set of criteria, including data or time range as well as one or more of the parameters specified in Appendix D, Functionality of the CAT System.[63]

Because of the potential size of the possible result sets, the Plan Processor must have functionality to create an intermediate result count of records before running the full query so that the query can be refined if warranted. The Plan Processor must include a notification process that informs users when reports are available, and there should be multiple methods by which query results can be obtained (e.g., web download, batch feed). Regulatory staff also must have the ability to create interim tables for access / further investigation. In addition, the Plan Processor must provide a way to limit the number of rows from a result set on screen with full results being created as a file to be delivered via a file transfer protocol.

The Plan Processor will be reasonably required to work with the regulatory staff at the Participants and other regulators[64] to design report generation screens that will allow them to request on-demand pre-determined report queries. These would be standard queries that would enable regulators quick access to frequently-used information and could include standard queries that will be used to advance the retirement of existing reports, such as Large Trader reporting.

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[63] Although the Plan Processor must account for multiple simultaneous queries, the Central Repository must also support the ability to schedule when jobs are run.

[64] Initially, only the SEC and Participants will have access to data stored in the Central Repository.

The Central Repository must, at a minimum, be able to support approximately 3,000 active users, including Participants' regulatory staff and the SEC, authorized to access data representing market activity (excluding the PII associated with customers and accounts).[65]

2. Time and Method by which CAT Data will be Available to Regulators (SEC Rule 613(a)(1)(ii))

SEC Rule 613(a)(1)(ii) requires the Participants to discuss the "time and method by which the data in the Central Repository will be made available to regulators to perform surveillance or analyses, or for other purposes as part of their regulatory and oversight responsibilities."[66] As the Commission noted, "[t]he time and method by which data will be available to regulators are fundamental to the utility of the Central Repository because the purpose of the repository is to assist regulators in fulfilling their responsibilities to oversee the securities markets and market participants."[67]

(a) Time Data will be Made Available to Regulators

At any point after data is received by the Central Repository and passes basic format validations, it will be available to the Participants and the SEC. The Plan Processor must ensure that regulators have access to corrected and linked order and Customer data by 8:00 a.m. Eastern Time on T+5.

As noted above, SEC Rule 613(e)(6) requires the prompt correction of data reported to the Central Repository, and the Participants believe that the timeframes established in Appendix D, Data Availability, meet this requirement. Additionally, each of the Bidders indicated that it would be able to process the reported data within these timeframes. However, the FIF, an industry trade group, expressed concern that the error repair window will constitute a significant burden to CAT Reporters and questioned whether the error repair window "can be reasonably met."[68] FIF supports maintaining the current OATS Error Handling timelines, which allow for error correction within five OATS-business days from the date of original submission.[69] SIFMA also recommends a five-day window for error correction.[70] Nevertheless, the Participants believe that it is imperative to the utility of the Central Repository that corrected data be available to regulators as soon as possible, and therefore the Participants do not support adopting the five-day repair window permitted under OATS, but instead are providing a three-day repair window for the Central Repository.[71]

(b) Method by which Data will be Available to Regulators

As required by SEC Rule 613(a)(1)(ii), this section describes the ability of regulators to use data stored in the Central Repository for investigations, examinations and surveillance, including the ability to search and extract such data.[72] The utility of the Central Repository is dependent on regulators being able to have access to data for use in market reconstruction, market analysis, surveillance and investigations.[73] The Participants anticipate that the Plan Processor will adopt policies and procedures with respect to the handling of surveillance (including coordinated, SEC Rule 17d-2 or RSA surveillance) queries and requests for data. In the RFP, the Participants asked that the Bidders describe:

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[65] The RFP required support for a minimum of 3,000 users. The actual number of users may be higher based upon regulator and Participant usage of the system.
[66] SEC Rule 613(a)(1)(ii).
[67] Adopting Release at 45790.
[68] FIF Response at 35.
[69] FIF Response at 35.
[70] SIFMA Recommendations at 62.
[71] One example of why the Participants believe a five day repair window is too long is that regulators may need access to the data as quickly as possible in order to conduct market reconstruction.

- the tools and reports that would allow for the extraction of data search criteria;[74]
- how the system will accommodate simultaneous users from Participants and the SEC submitting queries;[75]
- the expected response time for query results, the manner in which simultaneous queries will be managed and the maximum number of concurrent queries and users that can be supported by the system;[76]
- the format in which the results of targeted queries will be provided to users;[77]
- the methods of data delivery that would be made available to Participant regulatory staff and the Commission;[78]
- any limitations on the size of data that can be delivered at one time, such as number of days or number of terabytes;[79] and
- how simultaneous bulk data requests will be managed to ensure fair and equitable access.[80]

All Bidders provide means for off-line analysis[81] and dynamic search and extraction. The Bids described a variety of tools that could be used for providing access and reports to the Participants and the SEC, including: Oracle Business Intelligence Experience Edition, SAS Enterprises Business Intelligence, and IBM Cognos. The Bids proposed data access via direct access portals and via web-based applications. In addition, the Bids proposed various options for addressing concurrent users and ensuring fair access to the data, including: processing queries on a first in, first out (FIFO) basis; monitoring to determine if any particular user is using more systems resources than others and prioritizing other users' queries; or evaluating each users' demands on the systems over a predetermined timeframe and, if there is an imbalance, working with users to provide more resources needed to operate the system more efficiently.

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[72] SEC Rule 613(a)(1)(ii).
[73] Adopting Release at 45790.
[74] RFP Question 81.
[75] RFP Question 82.
[76] RFP Question 83.
[77] RFP Question 84.
[78] RFP Question 85.
[79] RFP Question 86.
[80] RFP Question 87.
[81] The SEC defined "off-line" analysis as "any analysis performed by a regulator based on data that is extracted from the [CAT] database, but that uses the regulator's own analytical tools, software, and hardware." Adopting Release at 45798 n.853.

The Bids included a multitude of options for formatting the data provided to regulators in response to their queries, including but not limited to FIX, Excel, Binary, SAS data sets, PDF, XML, XBRL, CSV, and .TXT. Some Bidders would provide Participants and the SEC with a "sandbox" in which the user could store data and upload its own analytical tools and software to analyze the data within the Central Repository, in lieu of performing off-line analyses.

The Participants anticipate that they will be able to utilize Central Repository data to enhance their existing regulatory schemes. The Participants do not endorse any particular technology or approach, but rather set forth standards which the Plan Processor must meet. By doing so, the Participants are seeking to maximize the utility of the data from the Central Repository without burdening the Plan Processor to comply with specific format or application requirements which will need to be updated over time. In addition, the Participants wanted to ensure that the Bidders have the ability to put forth the ideas they believe are the most effective.

(c) Report Building – Analysis Related to Usage of Data by Regulators

It is anticipated that the Central Repository will provide regulators with the ability to, for example, more efficiently conduct investigations, examinations, conduct market analyses, and to inform policy-making decisions. The Participants' regulatory staff and the SEC will frequently need to be able to perform queries on large amounts of data. The Plan Processor must provide the Participants and other regulators the access to build and generate targeted queries against data in the Central Repository. The Plan Processor must provide the regulatory staff at the Participants and regulators with the ability to create, adjust, and save any ad-hoc queries they run for their surveillance purposes via online or direct access to the Central Repository.[82] Queries will require a minimum set of criteria that are detailed in Appendix D.[83] The Plan Processor will have controls to manage load, cancel queries, if needed, and create a request process for complex queries to be run.[84] The Plan Processor must have a notification process to inform users when reports are available, provide such reports in multiple formats, and have the ability to schedule when queries are run.[85]

In addition, the Plan Processor will be required to reasonably work with the regulatory staff at the Participants and other regulators to design report generation screens that will allow them to request on-demand pre-determined report queries.[86] These would be standard queries that would enable regulators quick access to frequently-used information. This could include standard queries that will be used to advance the retirement of existing reports, such as Large Trader.[87]

The Plan Processor should meet the following response times for different query types. For targeted search criteria, the minimum acceptable response times would be measured in time increments of less than one minute. For the complex queries that either scan large volumes of data (e.g., multiple trade dates) or return large result sets (>1M records), the response time should generally be available within 24 hours of the submission of the request.

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[82] *Id.*
[83] *Id.*
[84] *Id.*
[85] *Id.*
[86] *Id.*
[87] *Id.*

The Central Repository will support a permission mechanism to assign data access rights to all users so that CAT Reporters will only have access to their own reported data, the regulatory staff at the Participants and other regulators will have access to data, except for PII.[88] Regulators that are authorized to access PII will be required to complete additional authentications. The Central Repository will be able to provide access to the data at the working locations of both the Participants' and SEC's regulatory staff as well as other non-office locations. The Central Repository must be built with operational controls to control access to make requests and to track data requests to support an event-based and time-based scheduler for queries that allows Participants to rely on the data generated.

In addition to targeted analysis of data from the Central Repository, regulators will also need access to bulk data for analysis. The Participants and other regulators will need the ability to do bulk extraction and download of data, based on a specified date or time range, market, security, and Customer-ID. The size of the resulting data set may require the ability to feed data from the Central Repository into analytical "alert" programs designed to detect potentially illegal activity.[89] "For example, the Commission is likely to use data from the Central Repository to calculate detailed statistics on order flow, order sizes, market depth and rates of cancellation, to monitor trends and inform Participant and SEC rulemaking."[90]

The Plan Processor must provide for bulk extraction and download of data in industry standard formats. In addition, the Plan Processor is required to generate data sets based on market event data to the Participants and other regulators. The Central Repository must provide the ability to define the logic, frequency, format, and distribution method of the data. It must be built with operational controls to track data requests to oversee the bulk usage environment and support an event-based and time-based scheduler for queries that allows Participants to rely on the data generated. Extracted data should be encrypted, and PII data should be masked unless users have permission to view the data that has been requested.

The Plan Processor must have the capability and capacity to provide bulk data necessary for the Participants and the other regulators to run and operate their surveillance processing. Such data requests can be very large; therefore, the Plan Processor must have the ability to split large requests into smaller data sets for data processing and handling. All reports should be generated by a configurable workload manager that is cost based, while also ensuring that no single user is using a disproportionate amount of resources for query generation.

(d) System Service Level Agreements (SLAs)

As further described in Appendix D, Functionality of CAT Systems, the Participants and the Plan Processor will enter into appropriate SLAs in order to establish system and operational performance requirements for the Plan Processor and help ensure timely Regulator access to Central Repository data. Among the items to be included in the SLA(s) will be specific requirements regarding query performance, linkage and order event processing performance of the Central Repository (e.g., linkage and data availability timelines, linkage errors not related to invalid data, and data retention) as well as system availability requirements (e.g., system uptime and DR/BCP performance). The Operating Committee will periodically review the SLAs according to the terms to be established in negotiation with the Plan Processor.

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[88] As documented in Appendix D, each CAT Reporter will be issued a public key pair ("PKI") that it can use to submit data, and access confirmation that their data has been received.
[89] Adopting Release at 45799. *See also* RFP § 2.8.2.
[90] Adopting Release at 45799.

3. The Reliability and Accuracy of the Data (SEC Rule 613(a)(1)(iii))

As required by SEC Rule 613(a)(1)(iii), this section discusses the reliability and accuracy of the data reported to and maintained by the Central Repository throughout its lifecycle, including: transmission and receipt from CAT Reporters; data extraction, transformation and loading at the Central Repository; data maintenance at the Central Repository; and data access by the Participants and other regulators. In the Adopting Release, the Commission noted that the usefulness of the data to regulators would be significantly impaired if it is unreliable or inaccurate and as such, the Commission requested that the Participants discuss in detail how the Central Repository will be designed, tested and monitored to ensure the reliability and accuracy of the data collected and maintained in it.[91]

(a) Transmission, Receipt, and Transformation

The initial step in ensuring the reliability and accuracy of data in the Central Repository is the validation checks made by the Plan Processor when data is received and before it is accepted into the Central Repository. In the RFP, the Participants stated that validations must include checks to ensure that data is submitted in the required formats and that lifecycle events can be accurately linked by 12:00 p.m. Eastern Time on T+1, four hours following the submission deadline for CAT Reporters.[92] Once errors are identified, they must be efficiently and effectively communicated to CAT Reporters on a daily basis. CAT Reporters will be required to correct and resubmit identified errors within established timeframes (as discussed in Appendix D, Data Availability).

The Plan Processor must develop specific data validations in conjunction with development of the Central Repository which must be published in the Technical Specifications. The objective of the data validation process is to ensure that data is accurate, timely and complete at or near the time of submission, rather than to identify submission errors at a later time after data has been processed and made available to regulators. To achieve this objective, a comprehensive set of data validations must be developed that addresses both data quality and completeness. For any data that fails to pass these validations, the Plan Processor will be required to handle data correction and resubmission within established timeframes both in a batch process format and via manual web-based entry.

To assess different validation mechanisms and integrity checks, the RFP required Bidders to provide information on the following:

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[91] Adopting Release at 45790-91, 45799.

[92] RFP Section 2.2.4.

- how data format and context validations for order and quote events submitted by CAT Reporters will be performed and how rejections or errors will be communicated to CAT Reporters;[93]

- a system flow diagram reflecting the overall data format, syntax and context validation process that includes when each types of validation will be completed and errors communicated to CAT Reporters, highlighting any dependencies between the different validations and impacts of such dependencies on providing errors back to CAT Reporters;[94]

- how related order lifecycle events submitted by separate CAT Reporters will be linked and how unlinked events will be identified and communicated to CAT Reporters for correction and resubmission, including a description of how unlinked records will be provided to CAT Reporters for correction (e.g., specific transmission methods and/or web-based downloads);[95]

- how Customer and Customer Account Information submitted by broker-dealers will be validated and how rejections or errors will be communicated to CAT Reporters;[96] and

- the mechanisms that will be provided to CAT Reporters for the correction of both market data (e.g., order, quotes, and trades) errors, and Customer and account data errors, including batch resubmissions and manual web-based submissions.[97]

Most Bidders indicated that Customer Account Information including SSN, TIN or LEI will be validated in the initial onboarding processing. Additional validation of Customer Account Information, such as full name, street address, etc., would occur across CAT Reporters and potential duplications or other errors would be flagged for follow-up by the CAT Reporters.

All Bidders recommended that order data validation be performed via rules engines, which allow rules to be created and modified over time in order to meet future market data needs. Additionally, all Bidders indicated that data validations will be real-time and begin in the data ingestion component of the system. Standard data validation techniques include format checks, data type checks, consistency checks, limit and logic checks, or data validity checks. Some Bidders mentioned the ability to schedule the data validation at a time other than submission, because there may be a need to have rules engines perform validation in a batch mode or customized schedule during a different time. All Bidders indicated that when errors are found, the Raw Data will be stored in an error database and notifications would be sent to the CAT Reporters. Most Bidders permitted error correction to be submitted by CAT Reporters at any time.

Section 6.3(b) of the CAT NMS Plan sets forth the policies and procedures for ensuring the timeliness, accuracy and completeness of the data provided to the Central Repository as required by SEC Rule 613(e)(4)(ii) and the accuracy of the data consolidated by the Plan Processor pursuant to SEC Rule 613(e)(4)(iii).[98] It also mandates that each Participant and its Industry Members that are CAT Reporters must ensure that its data reported to the Central Repository is accurate, timely, and complete. Each Participant and its Industry Members that are CAT Reporters must correct and resubmit such errors within established timeframes. In furtherance thereof, data related to a particular order will be reported accurately and sequenced from receipt or origination, to routing, modification, cancellation and/or execution. Additionally each Participant and its Industry Members that are CAT Reporters must test their reporting systems thoroughly before beginning to report data to the Central Repository and Appendix D sets forth that the Plan Processor must make testing facilities available for such testing.

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[93] RFP Question 14.
[94] RFP Question 15.
[95] RFP Question 16.
[96] RFP Question 17.
[97] RFP Question 18.

Pursuant to SEC Rule 613(e)(4)(iii), the Plan Processor will design, implement and maintain (1) data accuracy and reliability controls for data reported to the Central Repository and (2) procedures for testing data accuracy and reliability during any system release or upgrade affecting the Central Repository and the CAT Reporters.[99] The Operating Committee will, as needed, but at least annually, review policies and procedures to ensure the timeliness, accuracy, and completeness of data reported to the Central Repository.

In order to validate data receipt, the Plan Processor will be required to send an acknowledgement to each CAT Reporter notifying them of receipt of data submitted to the Central Repository to enable CAT Reporters to create an audit trail of their own submissions and allow for tracking of data breakdowns when data is not received. The data received by the Plan Processor must be validated at both the file and individual record level if appropriate. The required data validations may be amended based on input from the Operating Committee and the Advisory Committee. Records that do not pass basic validations, such as syntax rejections, will be rejected and sent back to the CAT Reporter as soon as possible, so it can repair and resubmit the data.

(b) Error Communication, Correction, and Processing

The Plan Processor will define and design a process to efficiently and effectively communicate to CAT Reporters identified errors. All identified errors will be reported back to the CAT Reporter and other Data Submitters who submitted the data to the Central Repository on behalf of the CAT Reporter, if necessary. The Central Repository must be able to receive error corrections and process them at any time, including timeframes after the standard repair window. The industry supports a continuous validation process for the Central Repository, continuous feedback to CAT Reporters on error identification and the ability to provide error correction at any time even if beyond the error correction timeframe.[100] The industry believes that this will better align with the reporting of complex transactions and allocations and is more efficient for CAT Reporters.[101] CAT Reporters will be able to submit error corrections through a web-interface or via bulk uploads or file submissions. The Plan Processor must support bulk replacement of records, subject to approval by the Operating Committee, and reprocess such replaced records. A GUI must be available for CAT Reporters to make updates to individual records or attributes.

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[98] SEC Rule 613(e)(4)(ii) and (iii).

[99] SEC Rule 613(e)(4)(iii).

[100] FIF Consolidated Audit Trail Working Group Processor Proposed Optimal Solution Recommendations at 6 (Sep. 15, 2014), *available at* http://www.sec.gov/comments/4-668/4668-16.pdf (the "FIF Optimal Solution Recommendations").

[101] FIF Response at 36.

Additionally, the Plan Processor will provide a mechanism to provide auto-correction of identified errors and be able to support group repairs (i.e., the wrong issue symbol affecting multiple reports).

SEC Rule 613(e)(6) also requires the Participants to specify a maximum Error Rate for data reported to the Central Repository pursuant to SEC Rule 613(c)(3) and (4).[102] The Participants understand that the Central Repository will require new reporting elements and methods for CAT Reporters and there will be a learning curve when CAT Reporters begin to submit data to the Central Repository.[103] However, the utility of the CAT is dependent on it providing a timely, accurate and complete audit trail for the Participants and other regulators.[104] Therefore, the Participants are proposing an initial maximum Error Rate of 5%, subject to quality assurance testing performed prior to launch, and it is anticipated that it will be reset when Industry Members, excluding Small Industry Members, begin to report to the Central Repository and again when Small Industry Members begin to report to the Central Repository. The Participants believe that this rate strikes the balance of making allowances for adapting to a new reporting regime, while ensuring that the data provided to regulators will be capable of being used to conduct surveillance and market reconstruction. Periodically, the Plan Processor will analyze reporting statistics and Error Rates and make recommendations to the Operating Committee for proposed changes to the maximum Error Rate. Changes to the maximum Error Rate will be approved by the Operating Committee. The maximum Error Rate will be reviewed and reset at least on an annual basis.

In order to help reduce the maximum Error Rate, the Plan Processor will measure the Error Rate on each business day and must take the following steps in connection with error reporting: (1) the Plan Processor will provide CAT Reporters with their error reports as they become available and daily statistics will be provided after data has been uploaded and validated by the Central Repository; (2) error reports provided to CAT Reporters will include descriptive details as to why each data record was rejected by the Central Repository; and (3) on a monthly basis, the Plan Processor will produce and publish reports detailing performance and comparison statistics, similar to the Report Cards published for OATS presently, which will enable CAT Reporters to identify how they compare to the rest of their industry peers and help them assess the risk related to their reporting of transmitted data.

All CAT Reporters exceeding the Error Rate will be notified each time that they have exceeded the maximum allowable Error Rate and will be informed of the specific reporting requirements that they did not fully meet (e.g., timeliness or rejections). Upon request from the Participants or other regulators, the Plan Processor will produce and provide reports containing

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[102] SEC Rule 613(e)(6)(i) defines "Error Rate" to mean "[t]he percentage of reportable events collected by the central repository for which the data reported does not fully and accurately reflect the order event that occurred in the market." All CAT Reporters, including the Participants, will be included in the Error Rate. CAT Reporters will be required to meet separate compliance thresholds, which will be a CAT Reporter-specific rate that may be used as the basis for further review or investigation into CAT Reporter performance (the "Compliance Thresholds"). Compliance Thresholds will compare a CAT Reporter's error rate to the aggregate Error Rate over a period of time to be defined by the Operating Committee. *See infra* note 113 and accompanying text (discussing Compliance Thresholds). A CAT Reporter's performance with respect to the Compliance Threshold will not signify, as a matter of law, that such CAT Reporter has violated SEC Rule 613 or the rules of any Participant concerning the CAT.

[103] As indicated by FINRA in its comment to the Adopting Release, OATS compliance rates have steadily improved as reporters have become more familiar with the system. When OATS was first adopted compliance rates were 76%, but current compliance rates are 99%. *See* Letter from Marcia E. Asquith, Senior Vice President and Corporate Secretary, FINRA, to Elizabeth M. Murphy, Secretary, Commission (Aug. 9, 2010).

[104] Adopting Release at 45790-91.

Error Rates and other metrics as needed on each CAT Reporter's Compliance Thresholds so that the Participants as Participants or the SEC may take appropriate action for failing to comply with the reporting obligations under the CAT NMS Plan and SEC Rule 613.

SEC Rule 613(e)(6) requires the prompt correction of data to the Central Repository. As discussed in the NMS Plan, there are a minimum of three validation processes that will be performed on data submitted to the Central Repository. The Plan Processor will be required to identify specific validations and metrics to define the Data Quality Governance requirements, as defined in Appendix D, Receipt of Data from Reporters.

The Plan Processor will identify errors on CAT file submissions that do not pass the defined validation checks above and conform to the Data Quality Governance requirements. Error Rates will be calculated during the CAT Data and linkage validation processes. As a result, the Participants propose an initial maximum overall Error Rate of 5%[105] on initially submitted data, subject to quality assurance testing period performed prior to launch.[106] It is anticipated that this Error Rate will be evaluated when Industry Members, excluding Small Industry Members, begin to report to the Central Repository and then again when Small Industry Members begin to report to the Central Repository.

In determining the initial maximum Error Rate of 5%, the Participants have considered the current and historical OATS Error Rates, the magnitude of new reporting requirements on the CAT Reporters and the fact that many CAT Reporters may have never been obligated to report data to an audit trail.

The Participants considered industry experience with FINRA's OATS system over the last 10 years. During that timeframe there have been three major industry impacting releases. These three releases are known as (1) OATS Phase III, which required manual orders to be reported to OATS;[107] (2) OATS for OTC Securities which required OTC equity securities to be reported to OATS;[108] and (3) OATS for NMS which required all NMS stocks to be reported to OATS.[109] Each of these releases was accompanied by significant updates to the required formats which required OATS reporters to update and test their reporting systems and infrastructure.

The combined average error rates for the time periods immediately following release across five significant categories for these three releases follow. The average rejection percentage rate, representing order events that did not pass systemic validations, was 2.42%. The average late percentage rate, representing order events not submitted in a timely manner, was 0.36%. The average order / trade matching error rate, representing OATS Execution Reports unsuccessfully matched to a TRF trade report was 0.86%. The average Exchange/Route matching error rate, representing OATS Route Reports unsuccessfully matched to an exchange order was 3.12%. Finally, the average Interfirm Route matching error rate, representing OATS Route Reports unsuccessfully matched to a report representing the receipt of the route by another reporting entity was 2.44%. Although the error rates for the 1999 initial OATS implementation were significantly higher than those laid out above, the Participants believe that technical innovation and institutional knowledge of audit trail creation over the past 15 years makes the more recent statistics a better standard for the initial Error Rate.[110] Based upon these historical error rates, and given that reporting to the Central Repository will involve reporting on new products (i.e., options) and reporting by new reporters (including both broker-dealers and Participants who have not previously been required to report to OATS), the Participants believe that the initial Error Rate will be higher than the recent rates associated with OATS releases and that an initial Error Rate of 5% is an appropriate standard.

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[105] As required by SEC Rule 613(e)(6)(ii), the Error Rate will be calculated on a daily basis as the number of erroneous records divided by the total number of records received on any given day and will be inclusive of validation of CAT Data and linkage validations. Error Rates are calculated for reporting groups as a whole, not for individual firms. Individual firms within a reporting group may have higher or lower Error Rates, though they would still be subject to any penalties or fines for excessive Error Rates to be defined by the Operating Committee. Additionally, this Error Rate will be considered for the purpose of reporting metrics to the SEC and the Operating Committee and individual firms will need to maintain Compliance Thresholds as described below.

[106] The Participants expect that error rates after reprocessing of error corrections will be *de minimis*.

[107] *See* FINRA, OATS Phase III, http://www.finra.org/Industry/Compliance/MarketTransparency/OATS/PhaseIII/.

[108] *See* FINRA, OATS Reporting Requirements to OTC Equity Securities, http://www.finra.org/Industry/Compliance/MarketTransparency/OATS/OTCEquitySecurities/.

[109] *See* FINRA, OATS Expansion to all NMS Stocks, https://www.finra.org/Industry/Compliance/MarketTransparency/OATS/NMS/.

The Participants believe that to achieve this Error Rate, however, the Participants and the industry must be provided with ample resources, including a stand-alone test environment functionally equivalent to the production environment, and time to test their reporting systems and infrastructure. Additionally, the Technical Specifications must be well written and effectively communicated to the reporting community with sufficient time to allow proper technical updates, as necessary. The Participants believe that the Error Rate strikes the balance of adapting to a new reporting regime, while ensuring that the data provided to regulators will be capable of being used to conduct surveillance and market reconstruction, as well as having a sufficient level of accuracy to facilitate the retirement of existing regulatory reports and systems where possible.

The Participants are proposing a phased approach to lowering the maximum Error Rate. Under the proposed approach, one year after a CAT Reporter's respective filing obligation has begun, their maximum Error Rate would become 1%.[111] Maximum Error Rates under the proposed approach would thus be as follows:

	One Year[112]	Two Years	Three Years	Four Years
Participants	5%	1%	1%	1%
Large broker-dealers	N/A	5%	1%	1%
Small broker-dealers	N/A	N/A	5%	1%

In addition to the above mentioned daily Error Rate, CAT Reporters will be required to meet separate Compliance Thresholds,[113] which rather than the Error Rate, will be a CAT Reporter-specific rate that may be used as the basis for further review or investigation into CAT Reporter performance. Although Compliance Thresholds will not be calculated on a daily basis, this does not: (1) relieve CAT Reporters from their obligation to meet daily reporting requirements set forth in SEC Rule 613; or (2) prohibit disciplinary action against a CAT Reporter for failure to meet its daily reporting requirements set forth in SEC Rule 613. The Operating Committee may consider other exceptions to this reporting obligation based on demonstrated legal or regulatory requirements or other mitigating circumstances.

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[110] The initial rejection rates for OATS were 23% and a late reporting rate of 2.79%.

[111] Error rate reporting will be bifurcated by reporter group (e.g., Large Broker/Dealers) rather than product type to minimize the complexity of Error Rate calculations

[112] As used in this table, "years" refer to years after effectiveness of the NMS Plan.

[113] Compliance Thresholds will be set by the Operating Committee. Compliance Thresholds for CAT Reporters will be calculated at intervals to be set by the Operating Committee. All CAT Reporters, including the Participants, will be subject to Compliance Thresholds. Compliance Thresholds will include, among other items, compliance with clock synchronization requirements.

In order to reduce the maximum Error Rate and help CAT Reporters to meet their Compliance Thresholds, the Plan Processor must provide support for CAT Reporter "go-live" dates, as specified in Appendix D, User Support.

(c) Sequencing Orders and Clock Synchronization

SEC Rule 613(c)(1) requires the Central Repository to provide "an accurate, time-sequenced record of orders," and SEC Rule 613(d)(1) requires the CAT NMS Plan to require each CAT Reporter "to synchronize its business clocks that are used for the purposes of recording the date and time of any reportable event . . . to the time maintained by the National Institute of Standards and Technology (NIST), consistent with industry standards." As an initial matter, because of the drift between clocks, an accurately-sequenced record of orders cannot be based solely on the time stamps provided by CAT Reporters. As discussed above, the CAT NMS Plan requires that CAT Reporters synchronize their clocks to within 50 milliseconds of the NIST. Because of this permitted drift, any two separate clocks can vary by 100 milliseconds: one clock can drift forward 50 milliseconds while another can drift back 50 milliseconds. Thus, it is possible to have, for example, one firm report the route of an order at 10:40:00.005 while the firm receiving the routed order reports a receipt time of 10:39:59.983 (i.e., the time stamps alone indicate that the routed order was received before it was sent). For this reason, the Participants plan to require that the Plan Processor develop a way to accurately track the sequence of order events without relying entirely on time stamps.[114]

There were several different approaches suggested by the Bidders to accomplish the accurate sequencing of order events. Some Bidders suggested using time stamp-based sequencing; however, most Bidders recognized that, while all CAT Reporters should have their time stamp clocks synchronized, in practice this synchronization cannot be wholly relied upon due to variations in computer systems. These Bidders rely on linkage logic to derive the event sequencing chain, such as parent/child orders. To help resolve time stamp issues, one Bidder proposed adding unique sequence ID numbers as well to the event information to help with time clock issues and a few others would analyze the variations on clock time and notify those CAT Reporters that need to resynchronize their clocks.

The Participants believe that using a linking logic not dependent on time stamps would enable proper sequencing of an order. This decision is supported by the industry since time stamps across disparate systems cannot be guaranteed and are likely to be error-prone.[115] The Participants believe that this type of sequencing can be successfully used for both simple and complex orders that will be reported to the Central Repository. The industry supports using event sequencing that is already built into the exchange protocols, which imposes sequencing and determines the true market environment.[116]

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[114] Events occurring within a single system that uses the same clock to time stamp those events should be able to be accurately sequenced based on the time stamp. For unrelated events, e.g., multiple unrelated orders from different broker-dealers, there would be no way to definitively sequence order events within the allowable clock drift as defined in Article 6.8.

[115] *See* Letter from Manisha Kimmel, Executive Director, Financial Information Forum, to Participant Representatives of the CAT (June 12, 2013), *available at* http://catnmsplan.com/industryFeedback/P284394 ("FIF Letter").

As required by Section 6.8(a) of the CAT NMS Plan, each Participant will synchronize its Business Clocks (other than Business Clocks used solely for Manual Order Events, which will be required to be synchronized to within one second of the time maintained by the NIST) used for the purposes of recording the date and time of any Reportable Event that must be reported under SEC Rule 613 to within 50 milliseconds of the time maintained by the NIST, and will adopt a Compliance Rule requiring its Industry Members to do the same. Furthermore, in order to ensure the accuracy of time stamps for Reportable Events, the Participants anticipate that Participants and Industry Members will adopt policies and procedures to verify such required synchronization each Trading Day (1) before the market opens and (2) periodically throughout the Trading Day.

As noted above, Rule 613(d)(1) requires the CAT NMS Plan to impose a clock synchronization requirement "consistent with industry standards." The Participants believe that the 50 millisecond clock synchronization drift tolerance included in Section 6.8(a) represents the current industry clock synchronization standard and therefore satisfies the Rule. To determine the current industry standard, the Participants relied on survey feedback provided by industry members, as further discussed in Appendix C, D.12.

Importantly, Section 6.8 requires, pursuant to Rule 613(c)(2), that Participants, together with the Plan Processor's Chief Compliance Officer, evaluate the clock synchronization standard on an annual basis to reflect changes in industry standards. Accordingly, to the extent existing technology that synchronizes business clocks with a lower tolerance (i.e., within less than 50 milliseconds drift from NIST) becomes widespread enough throughout the industry to constitute a new standard, the clock synchronization requirement of the CAT NMS Plan would be revised to take account of the new standard.

In accordance with SEC Rule 613(d), Section 6.8(c) of the CAT NMS Plan states that "[i]n conjunction with Participants and other appropriate Industry Member advisory groups, the Chief Compliance Officer shall annually evaluate whether industry standards have evolved such that: (i) the synchronization standard in Section 6.8(a) should be shortened; or (ii) the required time stamp in Section 6.8(b) should be in finer increments."

The Participants anticipate that compliance with this provision will require Participants and Industry Members to perform the following or comparable procedures. The Participants and their Industry Members will document their clock synchronization procedures and maintain a log recording the time of each clock synchronization performed, and the result of such synchronization, specifically identifying any synchronization revealing that the discrepancy between its Business Clock and the time maintained by the NIST exceeded 50 milliseconds. At all times such log will include results for a period of not less than five years ending on the then current date.

In addition to clock synchronization requirements, the Participants considered the appropriate level of time granularity to be required in the CAT NMS Plan. Although millisecond increments are generally the industry standard for trading systems, there is a wide range of time stamp granularity across the industry commonly ranging from seconds to milliseconds to micro-seconds for Latency sensitive applications.[117] The disparity is largely attributed to the age of the system being utilized for reporting, as older systems cannot cost effectively support, finer time stamp granularity.[118] To comply with a millisecond time stamp requirement, the Participants understand that firms may face significant costs in both time and resources to implement a consistent time stamp across multiple systems.[119] This may include a need to upgrade databases, internal messaging applications/protocols, data warehouses, and reporting applications to enable the reporting of such time stamps to the Central Repository.[120] Because of this, FIF recommended to the Participants a two year grace period for time stamp compliance.[121] FIF and SIFMA also supported an exception for millisecond reporting for order events that are manually processed, which is discussed below.[122]

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[116] FIF Letter at 11.

To the extent that any CAT Reporter uses time stamps in increments finer than the minimum required by the CAT NMS Plan, each Participant will, and will adopt a rule requiring its Industry Members that are CAT Reporters to, use such finer increments when providing data to the Central Repository.

With respect to the requirement under SEC Rule 613(c) and (d)(3) that time stamps "reflect current industry standards and be at least to the millisecond," the Participants believe that time stamp granularity to the millisecond reflects current industry standards. However, after careful consideration, including numerous discussions with the DAG, the Participants have determined that time stamp granularity at the level of a millisecond is not practical for order events that involve non-electronic communication of information ("Manual Order Events"). In particular, it is the Participants' understanding that recording Manual Order Events to the millisecond would be both very costly, requiring specialized software configurations and expensive hardware, and inherently imprecise due to the manner in which human interaction is required. The industry feedback that the Participants received through the DAG suggests that the established business practice with respect to Manual Order Events is to manually capture time stamps with granularity at the level of a second because finer increments cannot be accurately captured when dealing with manual processes which, by their nature, take longer to perform than a time increment of under one second. The Participants agree that, due to the nature of transactions originated over the phone, it is not practical to attempt granularity finer than one second, as any such finer increment would be inherently unreliable. Further, the Participants do not believe that recording Manual Order Events to the second will hinder the ability of regulators to determine the sequence in which Reportable Events occur.

As a result of these discussions, the Exemptive Request Letter requested exemptive relief from the Commission to allow the CAT NMS Plan to require Manual Order Events to be captured with granularity of up to and including one second or better, but also require CAT Reporters to report the time stamp of when a Manual Order Event was captured electronically in the relevant order handling and execution system of the party to the event. Granularity of the Electronic

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[117] Letter from T.R. Lazo, Managing Director, SIFMA, and Thomas Price, Managing Director, SIFMA (June 11, 2013), *available at* http://catnmsplan.com/industryFeedback/P284395 ("SIFMA Letter"); FIF Letter at 10.

[118] FIF Letter at 10.

[119] FIF Letter at 10; SIFMA Comments on Selected Topics at 11.

[120] FIF Letter at 10.

[121] FIF Letter at 10.

[122] FIF Letter at 10; SIFMA Letter at 11.

Capture Time will be consistent with the SEC Rule 613(d)(3) requirement that time stamps be at least to the millisecond.

Thus, the Participants have determined that adding the Electronic Capture Time would be beneficial for successful reconstruction of the order handling process and would add important information about how the Manual Order Events are processed once they are entered into an electronic system. Additionally, Manual Order Events, when reported, must be clearly identified as such.

(d) Data Maintenance and Management

Data Maintenance and Management of the Central Repository "refers to the process for storing data at the [C]entral [R]epository, indexing the data for linkages, searches, and retrieval, dividing the data into logical partitions when necessary to optimize access and retrieval, and the creation and storage of data backups."[123]

The Plan Processor must create a formal records retention policy to be approved by the Operating Committee. All of the data (including both corrected and uncorrected or rejected data) in the Central Repository must be kept online for a rolling six year period, which would create a six year historical audit trail. This data must be directly available and searchable by regulators electronically without any manual intervention. Additionally, the Plan Processor is required to create and maintain for a minimum of six years a symbol history and mapping table, as well as to provide a tool that will display a complete issue symbol history that will be accessible to CAT Reporters, Participants and the SEC.

Assembled lifecycles of order events must be stored in a linked manner so that each unique event (e.g., origination, route, execution, modification) can be quickly and easily associated with the originating customer(s) for both targeted queries and comprehensive data scans. For example, an execution on an exchange must be linked to the originating customer(s) regardless of how the order may have been aggregated, disaggregated, or routed through multiple broker-dealers before being sent to the exchange for execution.

Most Bidders recommended dividing data in the Central Repository into nodes based on symbol, date or a combination thereof in order to speed query response times. The Participants are not specifying how the data is divided, but will require that it be partitioned in a logical manner in order to optimize access and retrieval.

All of the Bidders addressed data loss through data replication and redundancy. Some of the Bidders proposed a hot-hot design for replication for primary and secondary data, so both sites are fully operational at all times and there would be no recovery time necessary in the case of fall-over to the secondary site. However, this is a more costly solution, and many Bidders therefore proposed data loss prevention by operating in a hot-warm design for replication to a secondary site. The Participants are requiring that the Plan Processor implement a disaster recover capability that will ensure no loss of data and will support the data availability requirements for the Central Repository and a secondary processing site will need to be capable of recovery and restoration of services at the secondary site within 48 hours of a disaster event.

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[123] Adopting Release at 45790 n.782.

(e) Data Access by Regulators

As detailed in Appendix C, Time and Method by which CAT Data will be Available to Regulators, the Participants and other regulators will have access to raw unprocessed data that has been ingested by the Central Repository prior to Noon Eastern Time on T +1.[124] Between Noon Eastern Time on T +1 and T+5, the Participants and other regulators should have access to all iterations of processed data.[125] At T+5, the Participants and other regulators should have access to corrected data.[126] The Plan Processor must adopt policies and procedures to reasonably inform Participants and the SEC of material data corrections made after T+5. The Participants and other regulators will be able to build and generate targeted queries against data in the Central Repository. More information about the report, query, and extraction capabilities can be found in Appendix D, Functionality of the CAT System.

(f) Data Recovery and Business Continuity

As noted above, in addition to describing data security and confidentiality, all of the Bidders were required to set forth an approach to data loss recovery and business continuity in the event of data loss. All of the Bidders addressed data loss through data replication and redundancy. Some of the Bidders proposed a hot-hot design for replication for primary and secondary data, so both sites are fully operational at all times and there would be no recovery time necessary in the case of fall-over to the secondary site. However, this is a more costly solution, and many Bidders therefore proposed data loss prevention by operating in a hot-warm design for replication to a secondary site.

The Plan Processor must comply with industry best practices for disaster recovery and business continuity planning, including the standards and requirements set forth in Appendix D, BCP / DR Process.

With respect to business continuity, the Participants have developed the following requirements that the Plan Processor must meet. In general, the Plan Processor will implement efficient and cost-effective backup and disaster recovery capability that will ensure no loss of data and will support the data availability requirements and anticipated volumes of the Central Repository. The disaster recovery site must have the same level of availability / capacity / throughput and data as the primary site. In addition, the Plan Processor will be required to design a Business Continuity Plan that is inclusive of the technical and business activities of the Central Repository, including the items specified in Appendix D, BCP / DR Process (e.g., bi-annual DR testing and an annual Business Continuity Audit).

4. The Security and Confidentiality of the Information Reported to the Central Repository (SEC Rule 613(a)(1)(iv))

As required by SEC Rule 613(a)(1)(iv), this section describes the security and confidentiality of the information reported to the Central Repository. As the Commission noted in the Adopting Release, keeping the data secure and confidential is critical to the efficacy of the

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[124] *See* Appendix C, Time and Method by which CAT Data will be Available to Regulators.

[125] *Id.*

[126] *Id.*

Central Repository and the confidence of market participants. There are two separate categories for purposes of treating data security and confidentiality: (1) PII; and (2) other data related to orders and trades reported to the CAT.[127]

Because of the importance of data security, the Participants included in the RFP numerous questions to Bidders requesting detailed information on their data security approaches. In the RFP, the Participants requested general information regarding the following:

- how the Bidder's solution protects data during transmission, processing, and at rest (i.e., when stored in the Central Repository);[128]
- the specific security governance/compliance methodologies utilized in the proposed solution;[129]
- how access to the data is controlled and how the system(s) confirms the identity of persons (e.g., username/password), monitors who is permitted to access the data and logs every instance of user access;[130]
- what system controls for users are in place to grant different levels of access depending on their role or function;[131]
- the strategy, tools and techniques, and operational and management practices that will be used to maintain security of the system;[132]
- the proposed system controls and operational practices;[133]
- the organization's security auditing practices, including internal audit, external audit, third-party independent penetration testing, and all other forms of audit and testing;[134]
- how security practices may differ across system development lifecycles and environments that support them (e.g., development, testing, and production);[135]
- experiences in developing policies and procedures for a robust security environment, including the protection of PII;[136]
- the use of monitoring and incident handling tools to log and manage the incident handling lifecycle;[137]

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[127] Some trade data (e.g., trade data feeds disseminated by the SIPs) is public and therefore of little concern from a security standpoint. However, because this data may be linked to confidential order data or other non-public information, the Participants are requiring the Plan Processor to store this public data in the same manner as the non-public order and trade information submitted to the Central Repository by Data Submitters.

[128] RFP Question 65.

[129] RFP Question 66.

[130] RFP Question 67.

[131] RFP Question 68.

[132] RFP Question 69.

[133] RFP Question 70.

[134] RFP Question 71.

[135] RFP Question 72.

[136] RFP Question 75.

- the approach(es) to secure user access, including security features that will prevent unauthorized users from accessing the system;[138]

- the processes/procedures followed if security is breached;[139]

- the infrastructure security architecture, including network, firewalls, authentication, encryption, and protocols; and[140]

- the physical security controls for corporate, data center and leased data center locations.[141]

All Bidders acknowledged the importance of data security; however, the proposals varied in the details about security policies, data access management, proactive monitoring and intrusion prevention, and how data security will be implemented. Some Bidders intend to leverage their experience in financial services and adopt their policies and technologies to control data, and many Bidders supported such measures as role-based access controls, two factor authentication, detailed system logs, and segmentation of sensitive data that is isolated in both logical and physical layers. Other Bidders indicated that they would use role-based security policies, data and file encryption, and redundant and layered controls to prevent unauthorized access. Additionally, Bidders noted that the physical locations at which data is stored need security measures to ensure data is not compromised. Some Bidders indicated that physical controls would include background checks for employees working with the system; physical building security measures (e.g., locks, alarms, key control programs, CCTV monitoring for all critical areas, and computer controlled access systems with ID badges).

The RFP also requested additional information specific to the treatment and control over PII. The RFP required Bidders to specifically address:

- how PII will be stored;[142] and

- how PII access will be controlled and tracked.[143]

All of the Bidders proposed segregating PII from the other data in the Central Repository. Additionally, all of the Bidders recommended limiting access to PII to only those regulators who need to have access to such information, and requiring additional validations to access PII. Although all Bidders proposed to keep a log of access to the Central Repository by user, the Bidders suggested different methods of authentication and utilized varying security policies, including the use of VPNs or HTTPS.

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[137] RFP Question 76.
[138] RFP Question 77.
[139] RFP Question 78.
[140] RFP Question 79.
[141] RFP Question 80.
[142] RFP Question 5.
[143] RFP Question 6.

The RFP also requested information from Bidders on data loss prevention ("DLP") and business continuity to ensure the continued security and availability of the data in the Central Repository. Specifically, the RFP asked Bidders to describe:

- their DLP program;[144] and
- the process of data classification and how it relates to the DLP architecture and strategy.[145]

Based upon the RFP responses, as well as input from the Participants' information security teams and discussions with the DAG, information security requirements were developed and are defined in Appendix D, Data Security. These requirements are further explained below.

(a) General Security Requirements

SEC Rule 613 requires that the Plan Processor ensure the security and confidentiality of all information reported to and maintained by the Central Repository in accordance with the policies, procedures, and standards in the CAT NMS Plan.[146] Based on the numerous options and proposals identified by the Bidders, the Participants have outlined multiple security requirements the Plan Processor will be required to meet to ensure the security and confidentiality of data reported to the Central Repository. The Plan Processor will be responsible for ensuring the security and confidentiality of data during transmission and processing as well as data at rest.

The Plan Processor must provide a solution addressing physical security controls for corporate, data center and any leased facilities where any of the above data is transmitted or stored. In addition to physical security, the Plan Processor must provide for data security for electronic access by outside parties, including Participants and the SEC and, as permitted, CAT Reporters or Data Submitters. Specific requirements are detailed in Appendix D, Data Security, and include requirements such as role-based user access controls, audit trails for data access, and additional levels of protection for PII.

Pursuant to SEC Rule 613(i)(C), the Plan Processor has to develop and maintain a comprehensive security program for the Central Repository with dedicated staff: (1) that is subject to regular reviews by the Chief Compliance Officer; (2) that has a mechanism to confirm the identity of all persons permitted to access the data; and (3) that maintains a record of all such instances where such persons access the data. In furtherance of this obligation, the CAT NMS Plan requires the Plan Processor to designate a Chief Compliance Officer and a Chief Information Security Officer, each subject to approval by the Operating Committee. Each position must be a full-time position. Section 6.2(a) of the CAT NMS Plan provides that the Chief Compliance Officer must develop a comprehensive compliance program covering all CAT Reporters, including the Participants and Industry Members.[147] Section 6.2(b) of the CAT NMS Plan provides that the Chief Information Security Officer shall be responsible for creating and enforcing appropriate policies, procedures, standards and control structures to monitor and address data security issues for the Plan Process and the CAT System as detailed in Appendix D, Data Security.

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[144] RFP Question 73. The Bidders were asked to include information pertaining to strategy, tools and techniques, and operational and management practices that will be used.

[145] RFP Question 74.

[146] SEC Rule 613(e)(4). This section of Appendix C provides an outline of the policies and procedures to be implemented. When adopting this requirement, the Commission recognized "the utility of allowing the [Participants] flexibility to subsequently delineate them in greater detail with the ability to make modifications as needed." Adopting Release at 45782. Additional detail is provided in Appendix D, Data Security.

Section 6.12 of the CAT NMS Plan requires that the Plan Processor develop and maintain a comprehensive information technology security program for the Central Repository, to be approved and reviewed at least annually by the Operating Committee. To effectuate these requirements, Appendix D sets forth certain provisions designed to (1) limit access to data stored in the Central Repository to only authorized personnel and only for permitted purposes; (2) ensure data confidentiality and security during all communications between CAT Reporters and the Plan Processor, data extractions, manipulation and transformation, loading to and from the Central Repository, and data maintenance by the Central Repository; (3) require the establishment of secure controls for data retrieval and query reports by Participants' regulatory staff and the SEC; and (4) otherwise provide appropriate database security for the Central Repository. Section 6.2(a) of the CAT NMS Plan provides that the Chief Compliance Officer, in collaboration with the Chief Information Security Officer, will retain independent third parties with appropriate data security expertise to review and audit on an annual basis the policies, procedures, standards, and real time tools that monitor and address data security issues for the Plan Processor and the Central Repository.[148]

The Plan Processor must have appropriate solutions and controls in place to ensure data confidentiality and security during all communication between CAT Reporters and the CAT System, data extraction, manipulation and transformation, loading to and from the Central Repository and data maintenance by the system. The solution must also address secure controls for data retrieval and query reports by Participant regulatory staff and the SEC. The solution must provide appropriate tools, logging, auditing and access controls for different components of the system, such as access to the Central Repository, access for CAT Reporters, access to rejected data, processing status and CAT Reporter calculated Error Rates.

In addition, pursuant to SEC Rule 613(e)(4)(i)(C)(2), the Plan Processor will develop and maintain a mechanism to confirm the identity of all persons permitted to access the data. The Plan Processor is responsible for defining, assigning and monitoring CAT Reporter entitlements. Similarly, pursuant to SEC Rule 613(e)(4)(i)(C)(3), the Plan Processor will record all instances where a person accesses the data.

Pursuant to SEC Rule 613(e)(4)(i)(B), Section 6.5(e)(ii) of the CAT NMS Plan requires each Participant to adopt and enforce rules that require information barriers between its regulatory staff and non-regulatory staff with regard to access to and use of data in the Central Repository, and permit only persons designated by such Participants to have access to and use of the data in the Central Repository.

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[147] *See* Section 6.2(a)(v) of the CAT NMS Plan for a more detailed list of the activities to be performed by the Chief Compliance Officer.

[148] *See* SEC Rule 613(e)(5).

The Plan Processor will also develop a formal cyber incident response plan to provide guidance and direction during security incidents, and will also document all information relevant to any security incidents, as detailed in Appendix D, Data Security.

(b) PII

As noted above, because of the sensitivity of PII, the Participants have determined PII should be subject to more stringent standards and requirements than other order and trading data. In response to the RFP questions, many Bidders mentioned that a range of techniques were required to ensure safety of PII. These techniques included development of PII policies and managerial processes for use by Plan Processor as well as Participants' staff and the SEC, physical data center considerations and strong automated levels, such as application, mid-tier, database, and operating systems levels, and use of role-based access and other parameters such as time-limited, case-restricted, and compartmentalized privilege. Most Bidders advocated for separate storage of PII in a dedicated repository to reduce the ability for hacking events to occur.

In accordance with SEC Rule 613(e)(4)(i)(A), all Participants and their employees, as well as all employees of the Plan Processor, will be required to use appropriate safeguards to ensure the confidentiality of data reported to the Central Repository and not to use such data for any purpose other than surveillance and regulatory purposes. A Participant, however, may use the data that it reports to the Central Repository for regulatory, surveillance, commercial, or other purposes.

The Participants anticipate that access to PII will be limited to a "need-to-know" basis. Therefore, it is expected that access to PII associated with customers and accounts will have a much lower number of registered users, and access to this data will be limited to Participants' staff and the SEC who need to know the specific identity of an individual. For this reason, PII such as SSN and TIN will not be made available in the general query tools, reports, or bulk data extraction.[149] The Participants will require that the Plan Processor provide for a separate workflow granting access to PII (including an audit trail of such requests) that allows this information to be retrieved only when required by specific regulatory staff of a Participant or the SEC, including additional security requirements for this sensitive data. Specifically, the Plan Processor must take steps to protect PII as defined in Appendix D, Data Security and including items such as storage of PII separately from order and transaction data, multi-factor authentication for access to PII data, and a full audit trail of all PII data access.

It is anticipated that the Technical Specifications will set forth additional policies and procedures concerning the security of data reported to the Central Repository; however, any such policies and procedures must, at a minimum, meet the requirements set forth in the CAT NMS Plan and Appendix D.

5. The Flexibility and Scalability of the CAT (SEC Rule 613(a)(1)(v))

(a) Overview

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[149] As described in Appendix C, Reporting Data to the CAT, general queries can be carried out using the Customer-ID without the need to know specific, personally-identifiable information (i.e., who the individual Person associated with the Customer-ID is). The Customer-ID will be associated with the relevant accounts of that Person; thus, the use of Customer-ID for querying will not reduce surveillance.

As required by SEC Rule 613(a)(1)(v), this section discusses the flexibility and scalability of the systems used by the Central Repository to collect, consolidate and store CAT Data, including the capacity of the Central Repository to efficiently incorporate, in a cost-effective manner, improvements in technology, additional capacity, additional order data, information about additional Eligible Securities or transactions, changes in regulatory requirements, and other developments.

The Plan Processor will ensure that the Central Repository's technical infrastructure is scalable, adaptable to new requirements and operable within a rigorous processing and control environment. As a result, the technical infrastructure will require an environment with significant throughput capabilities, advanced data management services and robust processing architecture. The technical infrastructure should be designed so that in the event of a capacity upgrade or hardware replacement, the Central Repository can continue to receive data from CAT Reporters with no unexpected issues.

The Plan Processor will perform assessments of the Central Repository's technical infrastructure to ensure the technology employed therein continues to meet the functional requirements established by the Participants. The Plan Processor will provide such assessments to, and review such assessments with, the Operating Committee within one month of completion. The Operating Committee will set forth the frequency with which the Plan Processor is required to perform such assessments. The Operating Committee must approve all material changes / upgrades proposed by the Plan Processor before they can be acted upon. The Operating Committee may solicit feedback from the Advisory Committee for additional comments and/or suggestions on changes to the capacity study as the Operating Committee determines necessary.

The Central Repository will employ optimal technology for supporting (1) scalability to increase capacity to handle a significant increase in the volume of data reported, (2) adaptability to support future technology developments and new requirements and (3) maintenance and upgrades to ensure that technology is kept current, supported and operational.

Participants will provide metrics and forecasted growth to facilitate Central Repository capacity planning. The Plan Processor will maintain records of usage statistics to identify trends and processing peaks. The Central Repository's capacity levels will be determined by the Operating Committee and used to monitor resources, including CPU power, memory, storage, and network capacity.

The Plan Processor will ensure the Central Repository's compliance with all applicable service level agreements concerning flexibility and scalability of the Central Repository, including those specified in the CAT NMS Plan and by the Operating Committee.

(b) Approaches proposed by Bidders

Information received from Shortlisted Bidders indicated that all six Shortlisted Bidders considered incoming transaction volumes to be one of their most significant drivers of cost across hardware, software, and full-time employees ("FTEs"), with the expected rate of increase in transaction volumes and retention requirements also being prominent drivers of cost. The approaches described above will facilitate effective management of these factors to provide for a cost-effective and flexible Central Repository.

As noted in the RFP, the Bidders were required to provide comments on how the Central Repository would be scalable for growth in the following aspects: number of issues accepted by the CAT, types of messages accepted by the CAT, addition of fields stored on individual data records or increases in any data type due to market growth. The Bidders were also requested to describe how the system can be scaled up for peak periods and scaled down as needed.

Bidders using a network infrastructure of data collection hubs noted the use of Ethernet links throughout a single hub as a method of handling additional throughput and capacity. Other Bidders note access points will be load balanced, allowing for additional capacity. Some Bidders note the need for continued monitoring to facilitate timely addition of capacity or other upgrades. Other Bidders highlighted the ability to scale processing horizontally by adding nodes to the database structure which will allow for additional capacity. In this instance, adding nodes to an existing clustered environment allows for the preservation of processing speed in the existing processing environment. In a cloud solution, Bidders note the systems will scale automatically. That is, the processing load or capacity is determined at the instance the tool is 'run' by the processer.[150] Some Bidders broadly note that the selection of platform components or features of their proposed solution infrastructure was the key in developing a scalable system. It is further noted that the selection of these elements allows for technological upgrades to incorporate newer technologies without a system replacement. Bidders identify the use of additional server and storage capacity as a key proponent of providing a scalable system.

6. The Feasibility, Benefits, and Costs for Broker-Dealers Reporting Allocations in Primary Market Transactions to the Consolidated Audit Trail (SEC Rule 613(a)(1)(vi))

SEC Rule 613(a)(1)(vi) requires the Participants to assess the feasibility, benefits and costs of broker-dealers reporting to the consolidated audit trail in a timely manner:

- The identity of all market participants (including broker-dealers and customers) that are allocated NMS Securities, directly or indirectly, in a Primary Market Transaction;[151]
- The number of such NMS Securities each such market participant is allocated; and
- The identity of the broker-dealer making each such allocation.[152]

The objective of this CAT NMS Plan is to provide a comprehensive audit trail that "allows regulators to efficiently and accurately track all activity in NMS securities throughout the U.S. markets." The Participants believe that an eventual expansion of the CAT to gather complete information on Primary Market Transactions would be beneficial to achieving that objective.

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[150] *See, e.g.*, Google Cloud Platform, https://cloud.google.com/developers/articles/auto-scaling-on-the-google-cloud-platform/.

[151] All observations and costs as provided in this section include secondary offerings.

[152] SEC Rule 613(a)(1)(vi).

However, based on the analysis directed to be completed as part of this plan, the Participants have concluded that it is appropriate to limit CAT submissions related to allocations in Primary Market Transactions to sub-account allocations, as described below.

Specifically, based on comments received by the Participants on this and other topics related to the consolidated audit trail,[153] the Participants believe that information related to sub-account allocations – the allocation of shares in a primary market offering to the accounts that ultimately will own them – currently is maintained by broker-dealers in a manner that would allow for reporting to the Central Repository without unreasonable costs and could assist the Commission and the Participants in their regulatory obligations, including a variety of rulemaking and policy decisions. By contrast, the reporting of so-called "top account" information in Primary Market Transactions to the Central Repository would involve significantly more costs which, when balanced against the marginal benefit, is not justified at this time. These issues are discussed further below.

As a preliminary matter, the analysis required pursuant to this section is limited to Primary Market Transactions in NMS Securities that involve allocations. As the Commission has noted, "'a primary market transaction is any transaction other than a secondary market transaction and refers to any transaction where a person purchases securities in an offering.'"[154] The Participants understand that Primary Market Transactions generally involve two phases that implicate the allocation of shares. The "book building" phase involves the process "by which underwriters gather and assess investor demand for an offering of securities and seek information important to their determination as to the size and pricing of an issue."[155] This process may involve road shows to market an offering to potential investors, typically institutional investors, including the discussion of the prospective issuer, and its management and prospects. The book building phase also involves efforts by the underwriter to ascertain indications of interest in purchasing quantities of the underwritten securities at varying prices from potential investors.[156] Using this and other information, the underwriter will then decide how to allocate IPO shares to purchasers. The Participants understand that these are so-called "top account" allocations – allocations to institutional clients or retail broker-dealers, and that such allocations are conditional and may fluctuate until the offering syndicate terminates. Sub-account allocations occur subsequently, and are made by top account institutions and broker-dealers prior to settlement. Sub-account allocations represent the allocation of IPO shares to the actual account receiving the shares and are based on an allocation process that is similar to secondary market transactions.[157]

(a) Feasibility

In the April 2013 Request for Comment, the Participants requested information on how firms handle Primary Market Transactions. In response to the request, FIF, SIFMA and Thomson Reuters submitted comments explaining current industry practice with respect to Primary Market

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[153] Questions for Public Comment re the CAT NMS Plan (Apr. 22, 2013), *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p246652.pdf ("April Request for Comment").

[154] Adopting Release at 45792 n.792.

[155] *See generally*, Securities Act Release No. 8565, 70 Fed. Reg. 19672 (Apr. 13, 2005) (Commission guidance regarding prohibited conduct in connection with IPO allocations) ("IPO Allocation Release").

[156] *Id.*

[157] *See* FIF Letter at 4.

Transactions.[158] Both SIFMA and FIF noted that broker-dealers generally maintain top account allocation information in book building systems that are separate from their systems for secondary market transactions and that differ across the industry, including the use of applications provided by third parties, in house systems and spreadsheets for small firms.[159] The Participants also understand that the investment banking divisions of broker-dealers typically use different compliance systems than those used for secondary market transactions.[160] The DAG also provided feedback[161] indicating that the impacted systems differ across the industry, given differing processes for Primary Market Transactions depending upon the structure of the deal, and that initial allocations are stored in book-building systems with varying levels of sophistication across the industry, including third-party systems, custom-built systems, and spreadsheets. The Participants thus believe that capturing indications of interest and other information about top account allocations in an accurate and consistent manner across the industry would be challenging.

By contrast, the Participants believe that it would be more feasible to gather information relating to sub-account allocations in Primary Market Transactions. The Participants understand that sub-account allocations are received in a manner and level of detail similar to allocations in secondary market transactions,[162] and that the same middle and back office systems that are used for the processing of sub-account allocations for secondary market transactions generally are also used for the sub-account allocations for Primary Market Transactions.[163] Similarly, sub-account allocations for Primary Market Transactions generally are maintained in an electronic format that could be converted into a reportable format acceptable for the CAT System. Therefore, these systems could more easily report information about sub-account allocations to the Central Repository than systems containing information regarding top-account allocations.

(b) Benefits

As the Commission notes, data about the final allocations of NMS Securities in Primary Market Transactions could improve compliance monitoring and market analyses by the Commission and the Participants, which, in turn, could help inform rulemaking and other policy decisions.[164] For example, such data could enhance the Commission's understanding of the role of the allocations in the capital formation process, when and how investors receiving allocations sell their Eligible Securities and how allocations differ among broker-dealers.[165] Such data also could assist the Commission and Participants in conducting their respective examinations and investigations related to Primary Market Transactions.[166]

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[158] *See* FIF Letter; SIFMA Letter; Thomson Reuters (May 21, 2013) ("Thomson Reuters Letter"), *available at* http://catnmsplan.com/industryFeedback/; *see also* Thomson Reuters Letter, http://catnmsplan.com/industryFeedback/P284396 (systems used for primary market allocations differ from those used for secondary market transactions).

[159] FIF Letter at 4; SIFMA Letter at 3

[160] FIF Letter at 4. The Participants also understand that top account allocation systems do not generally have execution reporting capacity, since reporting of primary market transactions is not currently required under OATS and other transaction reporting systems. SIFMA Letter at 2.

[161] *See* DAG Cost Estimate for Adding Primary Market Transactions into CAT (Feb. 17, 2015), *available at* http://catnmsplan.com/industryFeedback/P602480.

[162] FIF Letter at 4.

[163] For example, commenters noted that "firms generally use the same clearance and settlement systems for clearing and settling final allocations in primary market transactions as they do for clearing and settling secondary market trades." SIFMA Letter at 4.

[164] Adopting Release at 45792-93.

[165] *Id.*

The Participants believe that most of these potential benefits could be achieved through the gathering of information relating to sub-account allocations rather than top account information. For example, sub-account allocation information would aid the Commission and the Participants in gaining a better understanding of how shares allocated in Primary Market Transactions are sold in the secondary market, or how allocations differ across broker-dealers. By contrast, because top account information of conditional and interim allocations for NMS Securities fluctuates throughout the syndicate process and may vary significantly among firms, the marginal benefits of such information over final sub-account allocations are much less clear.

(c) Costs

The cost of reporting Primary Market Transaction information will depend on the scope of allocation information subject to the rule, as well as the related technology upgrades that would be necessary to report such information to the Central Repository. Based on the response of commenters, the Participants believe that reporting top account information about conditional allocations to the Central Repository would require significant technology enhancements. As noted above, current market practices capture top account allocations using systems and data sources that are different and separate from those used in secondary market transactions. Commenters also noted that there may be significant variability among underwriters in terms of the systems and applications used to gather such data.

The DAG provided cost estimates associated with the reporting of Primary Market Transactions.[167] These estimates indicated that to report both initial and sub-account allocations would cost the industry as a whole at least $234.8 million[168] and require approximately 36 person-months per firm to implement. The DAG's estimate to report sub-account allocations only was approximately $58.7 million[169] for the industry and would require approximately 12 person-months per firm to implement. The DAG commented that given the higher costs associated with reporting initial allocations, if Primary Market Transactions are required to be reported to the Central Repository, that only reporting final sub-account allocations be required.

Based upon this analysis, the Participants are supportive of considering the reporting of Primary Market Transactions, but only at the sub-account level, and will incorporate analysis of this requirement, including how and when to implement such a requirement, into their document outlining how additional Eligible Securities could be reported to the Central Repository, in accordance with SEC Rule 613(i) and Section 6.11 of the Plan.

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[166] *Id.*

[167] *See supra* note 161.

[168] Based upon an assumption of 12 person-months of business analysis, an implementation timeline of 3x the business analysis timeline, 21.741 person-days per month, a $1,200 daily FTE rate, and a multiplier of 250 to reflect the costs of the 250 largest reporting firms. 12 person-months of analysis * 3 * 21.741 person-days per month * $1,200 daily FTE rate = $939,211 * 250 = $234.8 million.

[169] Based upon an assumption of 3 person-months of business analysis, an implementation timeline of 3x the business analysis timeline, 21.741 person-days per month, a $1,200 daily FTE rate, and a multiplier of 250 to reflect the costs of the 250 largest reporting firms. 3 person-months of analysis * 3 * 21.741 person-days per months * $1,200 daily FTE rate = $234,802 * 250 = $58.7 million.

B. ANALYSIS OF THE CAT NMS PLAN: These considerations are intended to help inform the Commission about the cost for development, implementation and maintenance of the CAT and to help determine if such plan is in the public interest.

7. Analysis of Expected Benefits and Estimated Costs for Creating, Implementing, and Maintaining the Consolidated Audit Trail (SEC Rule 613(a)(1)(vii))

The analysis of expected benefits and estimated costs presented here is informed by the Commission's public guidance on conducting economic analysis in conjunction with SEC rulemaking.[170] The analysis begins with a statement of the need for regulatory action, describes the sources of information used in the analysis, and provides a description of the economic baseline used to evaluate the impacts associated with the CAT NMS Plan. The analysis then provides estimates of the costs to build, implement, and maintain the CAT, as contemplated, and ends with a description of the alternatives considered.

(a) Need for Regulatory Action

SEC Rule 613 further requires the Participants to consider and discuss in the CAT NMS Plan detailed estimated costs for creating, implementing, and maintaining the CAT as contemplated by the CAT NMS Plan. Specifically, SEC Rule 613 requires that the estimated costs should specify: (1) an estimate of the costs to the Participants in establishing and maintaining the Central Repository; (2) an estimate of the costs to broker-dealers, initially and on an ongoing basis, for reporting the data required by the CAT NMS Plan; (3) an estimate of the costs to the Participants, initially and on an ongoing basis, for reporting the data required by the CAT NMS Plan; and (4) the Participants' proposal to fund the creation, implementation, and maintenance of the CAT, including the proposed allocation of such estimated costs among the Participants and broker-dealers. Set forth below is a discussion of cost estimates, including the studies undertaken to obtain relevant data, as well as the proposed funding model.

(b) Economic Analysis

(i) Sources of Cost Information

Participants relied on two primary sources of information to estimate current audit trail costs (i.e., costs associated with the economic baseline), the costs incurred to meet the requirements of SEC Rule 613 for both the Participants and other CAT Reporters and the costs associated with the creation, implementation and maintenance of the CAT. First, to assess the costs associated with Participant and CAT Reporter obligations, Participants solicited study responses from Participants, broker-dealers and third party vendors. These three constituencies are the primary parties with direct costs arising from SEC Rule 613, as discussed further below. Second, to assess the costs associated with creating, implementing and maintaining the CAT, this analysis relies on estimated costs submitted by the Bidders as part of the bidding process.

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[170] *See, e.g.*, Memorandum to File Re: Current Guidance on Economic Analysis in SEC Rulemakings (Mar. 16, 2012), *available at* http://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf (outlining foundational elements of regulatory economic analysis).

(A) Studies

(1) Costs to Participants Study

The first study undertaken collected information from the Participants about current audit trail reporting costs under the existing regulatory reporting framework and the potential costs of reporting to the Central Repository (the "Costs to Participants Study"). Respondents were asked to estimate separately hardware, FTE staffing costs, and third party provider costs, where applicable. The study also requested information about costs associated with retiring current regulatory systems that would be rendered redundant by the CAT.

The Costs to Participants Study was distributed to the 19 Participants on August 11, 2014. The initial due date for responses was August 25, 2014; however due to the complexity of the data collection effort, the due date for the study was extended to September 24, 2014. Discussions with respondents suggested that at least some of the costs were more appropriate to measure at the level of the group of Affiliated Participants that hold multiple licenses ("Affiliated Participants Group"). Based on this approach, study results are presented for four Participants holding a single exchange registration and FINRA, which also is a Participant but is a registered securities association, and another five Affiliated Participants Groups representing the remaining fourteen registered exchanges. Subsequent to the filing of the CAT NMS Plan, the Participants determined that additional detail about anticipated costs could be provided to enhance the data collected as part of the Costs to Participants Study and a second data collection was conducted.

(2) Costs to CAT Reporters Study

The study sent to broker-dealers (the "Costs to CAT Reporters Study") was distributed to 4,406 broker-dealers,[171] and requested estimates for current costs under the existing regulatory reporting framework as well as future costs for reporting to the Central Repository. Broker-dealer respondents were asked to estimate the future costs to report to the Central Repository under two separate scenarios.[172] Approach 1 described a scenario in which broker-dealers would submit data to the Central Repository using their choice of existing industry messaging protocols, such as the FIX protocol. Approach 2 provided a scenario in which broker-dealers would submit data to the Central Repository using a defined or specified format, such as an augmented version of OATS. For each approach, respondents were asked to estimate separately hardware, FTE staffing costs, and third party provider costs, where applicable. Finally, broker-dealers were requested to provide the cost of retirement of existing systems to be replaced by the CAT.

The development of the Costs to CAT Reporters Study took place over two months, starting in May 2014, and included detailed discussions with the DAG. The Participants developed an initial outline of questions based on the requirements in SEC Rule 613, as well as a detailed assumptions document. To make the Costs to CAT Reporters Study effective and informative, the Participants spent two months formulating the Costs to CAT Reporters Study with detailed input from the DAG. The initial draft of the Costs to CAT Reporters Study was presented to the DAG in May 2014, and was discussed in two additional meetings with the DAG until mid-June 2014. In addition, on June 4, 2014, the Participants received and subsequently incorporated detailed written feedback from DAG members on the Costs to CAT Reporters Study and associated assumptions document.[173]

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[171] A unique study link was distributed to 4,406 broker-dealers. For 381 of the broker-dealers, the distribution email either was undeliverable or the broker-dealer responded that the study did not apply to them.

[172] *See* SEC Rule 613 – Consolidated Audit Trail (CAT) Cost Study Overview and Assumptions, *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p535485.pdf.

The study link was sent on June 23, 2014, to the compliance contact at each recipient CAT Reporter identified by the applicable designated examining authority or designated options examining authority to receive regulatory update and information requests. The initial due date for the study was August 6, 2014. On June 25, 2014 and July 9, 2014, the Participants hosted a webinar[174] to review the materials associated with the Costs to CAT Reporters Study, and to answer any questions from the CAT Reporters. On July 17, 2014, July 30, 2014, and August 4, 2014, reminders were sent to the CAT Reporters to submit their final responses to the Costs to CAT Reporters Study by August 6, 2014. In addition, the Participants requested that industry associations that are part of the DAG encourage their members to respond to the Costs to CAT Reporters Study.

On August 6, 2014, the first extension was granted for the Costs to CAT Reporters Study, extending the due date to August 20, 2014. On August 20, 2014, an additional extension was granted, extending the due date to September 3, 2014.

During the process of collecting responses to the Costs to CAT Reporters Study, CAT Reporters were informed that all responses were captured on an anonymous basis and would only be reported to the Participants in an aggregated, anonymous format. The third party facilitator of the Costs to CAT Reporters Study reviewed all responses received through the study portal. Study respondents had the option of identifying their firm should additional follow-up be required; any such follow-up was undertaken by the third-party facilitator, as necessary, to enhance the overall quality of responses received.

The Participants received 422 responses. Of those responses, 180 were deemed to be materially incomplete[175] and, thus, they were considered effectively nonresponsive. An additional 75 responses were determined to be clearly erroneous; for example the responses had repeating values that could not be used in analysis, or the magnitude of reported FTEs or other costs was so high as to be considered an outlier[176]. As a result, the Participants excluded these incomplete and clearly erroneous responses from the data set, resulting in a population of 167 responses that was used for purposes of conducting the cost analysis described herein.

(3) Costs to Vendors Study

A study requested information from various service providers and vendors about the potential costs of reporting to the Central Repository (the "Costs to Vendors Study"). The Participants developed the content of the Costs to Vendors Study, based on the structure and content of the Costs to CAT Reporters Study. The distribution list for the Costs to Vendors Study was provided by the DAG, and was distributed to 13 service bureaus and technology vendors on August 13, 2014. The initial due date for responses was September 1, 2014; however, due to the complexity of the data collection effort, the due date for the study was extended to September 12, 2014. The Participants received five completed responses to the Costs to Vendors Study.

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[173] *See* Past Events and Announcements, SROs Launch Study to Analyze Implementation Cost of the Consolidated Audit Trail (last updated Dec. 10, 2014), *available at* http://catnmsplan.com/PastEvents/.

[174] *See* SEC Rule 613: Consolidated Audit Trail (CAT), SRO Hosted Consolidated Audit Trail Cost Study Webinar (July 9, 2014), *available at* http://catnmsplan.com/PastEvents/P551992.

[175] Materially incomplete responses were those that provided responses for less than half of the cost-related questions.

[176] Responses were outliers if their values were two times greater than the next highest value.

(B) Bidder Estimates

To estimate the costs to Participants for creating, implementing and maintaining the CAT, Bidders were asked to provide in their Bid documents total one-year and annual recurring cost estimates. As part of the RFP process, the Bidders were asked to provide a schedule of the anticipated total cost of creating, implementing and maintaining the CAT. As noted above in the Background Section of Appendix C, any one of the six Shortlisted Bidders could be selected as the Plan Processor and each Shortlisted Bidder[177] has proposed different approaches to various issues. The Bidder selected as the Plan Processor must meet the specific requirements set forth in the Plan and Appendix D and may be given the opportunity to revise its Bid prior to the final selection of a Plan Processor. Accordingly, the Participants anticipate that the cost estimates to create, implement and maintain the CAT may differ from what is set forth below.[178]

In its final rule for the Consolidated Audit Trail, the Commission amended its proposal to include enhanced security and privacy requirements. Specifically, SEC Rule 613(e)(4) requires the NMS Plan to include policies and procedures, including standards, to be used by the Plan Processor to ensure the security and confidentiality of all information reported to the Central Repository. Participants did not ask Bidders to separately assess the costs associated with the enhanced security requirements in SEC Rule 613; rather these costs were embedded in the Bids as a component of the total costs.

The RFP requested that Bidders provide an estimate of the total one-time cost to build the CAT, including technological, operational, administrative, and any other material costs. The six Shortlisted Bidders provided estimates ranging from a low of $30,000,000 to a high of $91,600,000, with an average one-time cost of $53,000,000.[179]

The RFP also requested that Bidders provide an estimate of annual recurring operating and maintenance costs for the five year period following the selection of the Plan Processor, and an estimate of the annual peak year costs (i.e., cost for the year during which it will cost the most to operate the CAT). The six Shortlisted Bidders provided estimates ranging from a low of $135,000,000 to a high of $465,100,000 over the course of the first five years of operation, with an average five-year cost of $255,600,000 and an average annual cost of $51,100,000. Estimates of peak year recurring costs range from a low of $27,000,000 to a high of $109,800,000, with an average of $59,400,000. The table presented below reports the low, median, average, and maximum expected costs for the build, maintenance, and peak year maintenance of the Central

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[177] Section 5.2(b) of the CAT NMS Plan describes how the Participants selected the Shortlisted Bidders.

[178] More specifically, Participants anticipate that technology costs and technological solutions may evolve over the bidding process and may affect the Bids. For instance, one Bidder recently provided an update to the Participants, noting "We expect continued cost reductions as Moore's Law is applied to cloud pricing and to have this bring down total cost to the industry on an ongoing basis." As another example, evolving technologies for data security may either increase or decrease estimated costs.

[179] Due to the complexity of the cost estimation effort, all figures provided in this analysis section have been rounded to a reasonable degree of accuracy and should be considered approximate.

Repository arising from the Shortlisted Bids. These figures are subject to change as Bidders may update their cost estimates.

Bidder Estimates Summary				
	Minimum	**Median**	**Mean**	**Maximum**
Build Costs (One-time)	$30,000,000	$46,100,000	$53,000,000	$91,600,000
Maintenance Costs (Annual)	$27,000,000	$42,200,000	$51,100,000	$93,000,000
Maintenance Costs (5 year)	$135,000,000	$211,200,000	$255,600,000	$465,100,000
Peak Year Maintenance	$27,000,000	$52,400,000	$59,400,000	$109,800,000

The Participants note, however, that there may be a relation between the initial construction costs and maintenance costs based on technological choices, among other factors. To better compare estimates, the Participants are providing a range based on the reported combined build and annual recurring costs for the five year period following Plan Processor selection, discounted by a factor of 2%.[180] Estimates of total costs range from $159,800,000 to $538,700,000.

Participants sought insight into the economic drivers of the cost estimates from the Shortlisted Bidders. Specifically, Participants asked each Shortlisted Bidder to identify the factors, such as the amount of message traffic, complexity of order life cycles, number and complexity of Participant and Commission data requests and administration and support costs that were material to its Bid. Bidders identified the following as primary drivers of their Bid costs: (1) reportable volumes of data ingested into the Central Repository; (2) number of technical environments that would be have to be built to report to the Central Repository; (3) likely future rate of increase of reportable volumes; (4) data archival requirements; and (5) user support and/or help desk resource requirements.[181]

(ii) Economic Baseline

In publishing SEC Rule 613, the Commission stated that it "believes that the regulatory infrastructure on which the Participants and the Commission currently must rely generally is outdated and inadequate to effectively oversee a complex, dispersed, and highly automated national market system."[182] The purpose of the CAT NMS Plan is to develop, build and maintain a system that provides an infrastructure to appropriately monitor, surveil and oversee the national market system in its current state and provide sufficient flexibility to reasonably adjust for future financial market innovations.

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[180] The discount factor represents an estimate of the average yield on AAA-rated corporate debt for the month period August 28, 2014 to September 27, 2014. Costs anticipated to be accrued after the first year (years 2 through 5) are discounted back to the first year to permit Participants to compare the anticipated costs associated with different Bids on a constant dollar basis.

[181] Bidders indicated that user support costs primarily consisted of FTE costs.

[182] Adopting Release at 45723.

Such a system will necessarily impact the Commission, Participants, potential future Participant entrants, broker-dealers and other market participants, issuers and investors. Each party may derive costs, benefits and other economic impacts, depending upon plan implementation, the relevant economic activities of each entity and the allocation of costs and responsibilities across those entities. These estimated costs, benefits, and other economic impacts must be assessed against the current economic baseline, capturing the existing state of regulatory audit trail activity in the markets. The economic baseline for different affected parties is described in greater detail below.

(A) Description of Current Audit Trail Reporting

Currently, separate audit trails exist within each exchange in addition to the audit trail requirements for FINRA members to report to OATS.[183] For equities, all broker-dealers that are members of FINRA must report their orders in NMS Stocks and OTC Equity Securities, including executions or cancellations, to OATS. Accordingly, for FINRA members, it is possible to match OATS reports to related exchange audit trail entries, provided that the related exchange has a regulatory services agreement with FINRA such that FINRA has access to the exchange data. Broker-dealers that are not FINRA members do not have a regular equity audit trail reporting requirement, although NYSE and NASDAQ member proprietary firms that are not FINRA members have an obligation to record OATS data and report to FINRA upon request. Additionally, each exchange creates its own audit trail for each order received that it receives and processes.

For options, the options exchanges utilize the Consolidated Options Audit Trail System ("COATS") to obtain and review information on options transactions. COATS data includes trades, the National Best Bid and National Best Offer at the time of the trade and clearing information for customers at the clearing firm level. It also identifies clearing firm proprietary trading and individual marker maker transactions if they are reported correctly at the time of the trade. However, COATS does not include adjustment data from the Options Clearing Corporation; these adjustments include changes to either the account type or size of the position. Additionally, order information is only available to the Commission upon request from the options exchanges. Currently reports need to be constructed based on order information received from the various options exchanges. As previously noted, only the National Best Bid and National Best Offer at the time of the trade is included in the COATS data; however, this is optional data that the exchanges may or may not provide. The options exchanges utilize their independent quote information to build their reports.

In sum, each equities and options exchange is built on its own unique platform, utilizes unique entry protocols and requirements and thus creates uniquely formatted audit trails.

The existence of multiple non-integrated audit trails has direct consequences on the accuracy and efficiency of regulatory oversight. The Commission has stated that:

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[183] *See* FINRA Rule 7410 *et seq.*

> …there are shortcomings in the completeness, accuracy, accessibility, and timeliness of these existing audit trail systems. Some of these shortcomings are a result of the disparate nature of the systems, which make it impractical, for example, to follow orders through their entire lifecycle as they may be routed, aggregated, re-routed, and disaggregated across multiple markets. The lack of key information in the audit trails that would be useful for regulatory oversight, such as the identity of the customers who originate orders, or even the fact that two sets of orders may have been originated by the same customer, is another shortcoming.[184]

In addition, the Intermarket Surveillance Group's ("ISG") consolidated equity audit trail combines transaction data from all exchanges and is used by all Participants for surveillance purposes. However, the ISG audit trail is limited because it contains clearing member and executing broker's CRD numbers, but does not contain information about the beneficial owner to a trade. It also does not contain order detail information such as a complete order entry time or routing history.

COATS and the ISG equity audit trails are utilized to generate various option cross market/cross product exception reports, such as front-running and anticipatory hedges. Since the current data is unable to drill down to beneficial owner or order information, these reports are less effective and produce a large number of false positives.

(B) Costs, Benefits, and Other Economic Impacts of Audit Trail Reporting on Regulators and Market Participants

(1) Participants

There are 19 Participants of varying sizes that have established audit trail reporting requirements for NMS Securities. Of these, one is a registered securities association. The other 18 Participants are exchanges. Fourteen of these exchanges permit quotation and transactions in NMS Securities and 12 permit transactions and quotations in Listed Options.

Participants expend resources currently to maintain and update their audit trail reporting systems. Costs for current surveillance programs as indicated by Participants responding to the Costs to Participants Study vary significantly, reflecting the various sizes of Participants: total annual costs associated with meeting current regulatory requirements are estimated to be $6,900,000. Total annual costs for current surveillance programs for all Participants are $147,200,000.

(2) Broker-Dealers

Broker-dealers benefit from the current regime of audit trail reporting to the extent that reporting today permits the Commission and Participants to monitor for rule compliance.

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[184] Adopting Release at 45722.

Effective regulatory and compliance oversight ensures increased market integrity and supports investor confidence in participating in financial markets. Conversely, if investors believe that regulators are unable to adequately and effectively monitor activities in a complex market (through current audit trail reporting), broker-dealers bear some of the cost in the form of lower market activity.

Broker-dealers that are FINRA members must have systems and processes in place to provide FINRA with the reportable data in the required format. These systems also require resources to ensure that data quality and consistency and timeliness of reporting are maintained, and record-keeping obligations are fulfilled.[185] Additionally, firm trading and order routing systems send orders and quotations to each exchange in the format required by such exchange. In turn, each exchange must store and convert the data for the purposes of creating internal exchange audit trails. Broker-dealers also commit staff to respond to Participant and Commission requests for additional data and related information based upon surveillance.

Broker-dealers may take varied approaches to fulfilling their regulatory reporting obligations. For instance, many broker-dealers develop internal systems for the purpose of compiling order and trading data into a reportable format. In these instances, the firms may need to centralize varied and disparate systems. Other broker-dealers typically use third parties to help them comply with their reporting obligations. These third parties may include service bureaus that provide the firms with order management systems. Firms may also contract with their clearing firms to package and submit order data files on their behalf.

Some broker-dealers that are FINRA members may be exempt from OATS reporting, or are excluded under FINRA rules from OATS requirements. Exempt firms go through a formal exemption request process through which they certify that they meet the exemption criteria which includes: (1) the member firm has total annual revenue of less than $2,000,000; (2) the member firm and current control affiliates and associated persons of the member have not been subject within the last five years to any final disciplinary action, and within the last 10 years to any disciplinary action involving fraud; (3) the member does not conduct any clearing or carrying activities for other firms; (4) the member does not conduct any market making activities in NMS Stocks and OTC Equity Securities; and (5) the member does not execute principal transactions with its customers.[186] FINRA also excludes some members from the definition of a reporting member. The criteria to receive this exclusion include: (1) the member must engage in a non-discretionary order routing process where the firm immediately routes all of its orders to a single receiving reporting member; (2) the member cannot direct or maintain control over subsequent routing or execution by the receiving reporting member; (3) the receiving reporting member must record and report all information under applicable FINRA rules; and (4) the member must have a written agreement with the receiving reporting member specifying the respective functions and responsibilities of each party.[187] Approximately 660 broker-dealers are either exempt or excluded from OATS requirements, but will be required to report to the Central Repository. These broker-dealers are included in the estimate of broker-dealers currently quoting or executing trades in NMS Securities and/or Listed Options.

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[185] *See, e.g.*, SEC Rules 17a-3, 17a-4; FINRA Rules 4511-13.
[186] *See* FINRA Rule 7470.
[187] *See* FINRA Rule 7410(o).

Additionally, the OATS rules do not require that proprietary orders generated in the normal course of market-making be reported.[188] While some firms have chosen to voluntarily report such orders, there may be current gaps in the audit trail.

Broker-dealers that are members of other Participants must also have systems and processes in place to provide the necessary reportable data in the required format. These systems also require resources to ensure data quality and consistency, timeliness of reporting, and record-keeping obligations.[189] Broker-dealers that are members of more than one Participant must maintain and manage systems that provide the relevant audit trail data to each Participant for which they have an obligation to report such data, in the manner and by the rules proscribed by each Participant, as applicable.

Upon request, broker-dealers must submit Electronic Blue Sheet ("EBS") data to the requesting Participant by the specified due date, which is generally ten business days after receipt of the initial request. An EBS request is made by product and trade date range, with the data providing detailed information about the underlying accounts that transacted in the requested security. EBS requests can only be made for settled transactions in equity, option, or fixed income products, and they include information on allocations and executions of the requested product and may cover a time period of up to seven years from the date requested. Large Trader Reports are similar to EBS reports, except they are requested only by the Commission. Large trader requests may only be requested for NMS Securities, which may include unsettled transactions. In addition to requests being made by security and trade date range, a Large Trader request may be made by a LTID and trade date range. An LTID is an SEC identifier used to identify related entities under the same beneficial ownership structure. Broker-dealers must have systems and processes in place to provide EBS or large trader reportable data in the required format. These systems require resources to ensure that the data quality and timeliness of reporting are maintained, and record-keeping obligations are met. As with OATS, broker-dealers must commit staff to respond to requests for EBS or large trader data and may take varied approaches to fulfilling their regulatory reporting obligations.

PHLX Rule 1022 initially required members to submit specified data to PHLX for all accounts, however this rule was amended in May 2014 to more closely mirror NYSE Rule 757, ARCA Rule 6.39, and CBOE Rule 8.9, and to only require broker-dealers to report data for all of the accounts for which they engage in trading activities or which they exercise investment discretion upon request, rather than on a continuing basis. PHLX Rule 1022 was in place prior to the existence of the compliance data files from ISG (COATS and ECAT) and OCC (position). The remaining requirement for members to provide data upon request is to enable a review if required for regulatory purposes. PHLX Rule 1022 is anticipated to be retired once all CAT Reporters are submitting data to the CAT as the information would be obtainable from CAT, rather than from Industry Members.

CBOE Rule 8.9(b) requires clearing firms to submit, on a daily basis and in a manner prescribed by CBOE, every executed order entered by market makers for securities underlying options traded on CBOE or convertible into such securities or for securities traded on CBOE, as well as for opening and closing positions in all such securities held in each market maker account.

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[188] *See* FINRA Rule 7410(j).
[189] *See, e.g.*, SEC Rules 17a-3, 17a-4; FINRA Rules 4511-13.

To the extent that clearing firms do not report such orders and information, the market maker who entered the order is responsible for reporting the order information. These data files are commonly known as Market Maker Equity Trade (MMET) and Market Maker Stock Position (MMSTK) files. The CBOE daily reporting requirement for market makers is comparable to other option exchange reporting requirements. CBOE Rule 8.9(b) is anticipated to be amended once all CAT Reporters are submitting data to the CAT as the information would be obtainable from CAT rather than from Industry Members.

As of June 30, 2014, there were 4,406 registered broker-dealers that were members of at least one Participant. The Participants determined that, as of July 31, 2014, approximately 1,800 of these registered broker-dealers quoted or executed transactions in NMS Securities, Listed Options or OTC Equity Securities. Of these 1,800 broker-dealers, approximately 1,700 are FINRA members and are either reporting to OATS or were identified as routing firms in OATS reports submitted by other OATS reporting broker-dealers, but are otherwise excluded from the definition of an OATS reporting member or exempt from the OATS rules. In addition, there are an estimated 100 broker-dealers that reported transactions to another SRO, but that are not FINRA members. This determination was made through a review of the number of broker-dealers that transmitted order information to OATS, reported transaction information or quoted messages to a Participant for each month, over the previous 18 months. The Participants also reviewed message traffic data in the same month in the prior year and found that July 2014 was a reasonable representation of such activity.

Cost components considered in this process included technology costs (hardware / software costs), FTE costs (including, technology, operational, and compliance staffing requirements), and any outsourcing costs.[190] The study also contained questions related to current costs that are intended to capture the baseline costs to broker-dealers for regulatory reporting, including costs related to compliance with OATS, the EBS and Large Trader reporting, and other reporting requirements, such as NYSE Rule 410B, PHLX Rule 1022, FESC/NYSE Rule123(e)/(f), and CBOE Rule 8.9.

(C) Description of Costs to CAT Reporters Study Results

Of the 167 responses to the Costs to CAT Reporters Study used in the analysis of costs associated with reporting to the Central Repository, 49 were from large firms and 118 were from small firms.[191] Fifty-one respondents indicated that they have OATS reporting obligations and

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[190] These costs are not mutually exclusive, and respondents may have included a combination of costs across all categories.

[191] Firms were requested to self-select as "small" if they would qualify under Exchange Act Rule 0-10(c) as a broker or dealer that:

> (1) had total capital (net worth plus subordinated liabilities) of less than $500,000 on the date in the prior fiscal year as of which its audited financial statements were prepared pursuant to 240.17a5(d) or, if not required to file such statements, a broker or dealer that had total capital (net worth plus subordinated liabilities) of less than $500,000 on the last business day of the preceding fiscal year (or in the time that it has been in business, if shorter); and
>
> (2) is not affiliated with any Person (other than a natural Person) that is not a small business or small organization as defined in this section.

116 respondents[192] stated that they do not currently have OATS reporting obligations.[193] Of these 51 OATS reporters, 21 were large and 30 were small broker-dealers, with one firm completing all reporting using in-house staffing, 26% using a combination of in-house staffing and outsourcing, 44% of firms outsourcing to clearing firms, and the remaining 26% outsourcing their reporting to service bureaus. Of the remaining 116 broker-dealers, self-identified as non-OATS reporters,[194] 28 were large and 88 were small. Figures for each respondent category have been provided for reference to support the cost analysis and include the average, median, minimum, maximum, and number of responses received equal to zero (0) or blank.[195]

In analyzing responses to the Costs to CAT Reporters Study, Participants found responses to specific questions to be outliers. However, if the overall response from that respondent was otherwise deemed to be reasonably complete, the response was included in the analysis. As a result, in some cases, this may result in averages or medians being higher or lower than may be expected. In addition, a significant number of firms, in particular large firms, indicated that their current cost for regulatory obligations is $0. It is the Participants' understanding that this is likely due to current operational practices among broker-dealers that do not differentiate between technology and headcount costs that support business functionality and regulatory reporting.

Tables 1 and 2 describe the costs associated with current regulatory reporting requirements. Current costs for study respondents consisted of hardware / software costs, FTE costs consisting of development / maintenance, operational, and compliance staffing as well as third party outsourcing costs. Current average (median) hardware / software costs for the 49 large firms were equal to $310,000 ($0) and the 118 small firms were equal to $130,000 ($0).

Large firms reported that they employ an average (median) of 9.56 (0.00) FTEs for OATS, EBS and other regulatory reporting requirements, while small firms employed 2.36 (0.00) FTEs for the same reporting requirements. Participants estimate the dollar costs associated with these FTEs by applying an annual expenditure of $401,440 per FTE[196] to determine cost. The resulting average (median) FTE costs were equal to $3,800,000 ($0) for the 49 large firms and $950,000 ($0) for the 118 small firms.

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[192] Participants recognize that 116 respondents stated that they do not currently report to OATS and this number is greater than the Participants' estimate of the total number of broker-dealers with reporting obligations to SROs other than FINRA. Participants assume that some broker-dealers who are FINRA members and currently exempt or excluded from OATS reporting requirements identified themselves as having no OATS reporting requirement. Given that these study responses provided data that could not otherwise be presumed to be incomplete or inaccurate, the Participants have chosen to include these responses in the analysis.

[193] The distinction between cost estimates for OATS and non-OATS reporters is being made so that Participants may assess potential differences in estimated costs across the two identified scenarios in order to capture potential differences in costs that might arise from current reporting practices.

[194] The distinction between cost estimates for OATS and non-OATS reporters is made so that Plan Participants may assess potential differences in estimated costs across the two identified scenarios in order to capture potential differences in costs that may arise from current reporting practices.

[195] Some respondents provided no response to a specific question, i.e., left that response blank, while providing responses to the other questions in the study. The tables provided throughout this section provide a count of such blank responses for each question.

[196] Participants assume an annual cost per FTE of $401,440, consistent with the rate applied by the Commission in the Adopting Release. Participants do note, however, that as part of the Costs to CAT Reporters Study, respondents were solicited to provide a cost for FTEs. Based on responses, the estimated annual cost per FTE would be $210,000 for large firms and $167,000 for small firms. Applying these estimates instead of the Commission's assumed annual cost would lead to dollar costs for FTEs on the order of half as large as reported here.

Third party / outsourcing costs were also varied by firm size. Average (median) third party / outsourcing costs for large firms was $180,000 ($0) and $130,000 ($0) for small firms.[197]

Based on the costs associated with current regulatory reporting requirements, large firms provided an average cost of $4,290,000, and small firms reported an average cost of $1,210,000 for current reporting costs, with a median estimate of $0 for both large and small firms.

Table 1: Current Costs: Large Respondents Summary (49 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$310,000	9.56	$3,800,000	$180,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	0.13	$52,000	$1,000
Maximum	$6,000,000	190.00	$76,300,000	$6,000,000
Count of Zero Responses	31	25	25	36
Count of Blank Responses	0	0	0	0

Table 2: Current Costs: Small Respondents Summary (118 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$130,000	2.36	$950,000	$130,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	0.15	$60,000	$1,000
Maximum	$14,000,000	68.00	$27,300,000	$6,500,000
Count of Zero Responses	96	89	89	93
Count of Blank Responses	0	0	0	0

Tables 3 to 6 describe the current regulatory costs for respondents who identified themselves as having OATS reporting obligations versus those that do not (referred to as non-OATS). For the 21 large OATS reporters, current hardware / software costs averaged $720,000, with a median cost of $10,000, while the 28 large non-OATS reporters reported an average hardware / software cost of $2,600, with a median cost of $0. For the 30 small OATS reporters, current hardware / software costs averaged $490,000, with a median value of $3,000, with the 88 small non-OATS reporters reporting an average hardware / software cost of $900 and a median cost of $0.

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[197] One anonymous small firm in the sample reported a total current regulatory reporting cost of $14 million. The Participants are not in a position to verify this number or determine whether it is due to an erroneous response (e.g., the respondent may not have recognized that the study collected responses to the cost questions in $1,000 increments). Therefore, Participants believe median numbers might better represent the typical costs across large and small firms instead of reported averages.

Large OATS reporters stated they required, on average, 17.88 FTEs, with a median value of 7.00 FTEs. Applying the FTE rate described above, this translates into an average FTE cost of $7,200,000, and a median value of $2,800,000. Large non-OATS reporters indicated an average FTE requirement of 3.32 and a median requirement of 0.00, translating into an average cost of $1,300,000 and a median cost of $0. On the other side of the spectrum, small OATS reporters stated they required, on average, 6.11 FTEs, with a median value of 3.50 FTEs. Applying the FTE rate described previously, this translates into an average FTE cost of $2,500,000, and a median value of $1,400,000. Small non-OATS reporters indicated average FTE requirements of 1.08 and a median requirement of 0.00, translating into an average cost of $430,000 and median cost of $0.

Third party / outsourcing costs for Large OATS reporters averaged $400,000, with a median value of $0; large non-OATS reporters indicated average third party / outsourcing costs of $22,000, with a median value of $0. For small OATS reporters, third party / outsourcing costs averaged $510,000 with a median value of $3,000; small non-OATS reporters provided average costs of $2,900, with median costs of $0.

Based on the cost estimates above, large OATS reporters estimated an average (median) cost equal to $8,320,000 ($2,810,000) while large non-OATS respondents estimated an average (median) cost equal to $1,324,600 ($0). Small OATS reporters estimated an average (median) cost equal to $3,500,000 ($1,406,000) while small non-OATS respondents estimated an average (median) cost equal to $433,800 ($0).

Table 3: Current Costs: Large OATS Respondents Summary (21 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$720,000	17.88	$7,200,000	$400,000
Median	$10,000	7.00	$2,800,000	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	0.13	$52,000	$1,000
Maximum	$6,000,000	190.00	$76,300,000	$6,000,000
Count of Zero Responses	6	2	2	11
Count of Blank Responses	0	0	0	0

Table 4: Current Costs: Large Non-OATS Respondents Summary (28 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$2,600	3.32	$1,300,000	$22,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0

Minimum (non-zero)	$5,000	1.00	$400,000	$60,000
Maximum	$50,000	60.00	$24,100,000	$300,000
Count of Zero Responses	25	23	23	25
Count of Blank Responses	0	0	0	0

Table 5: Current Costs: Small OATS Respondents Summary (30 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$490,000	6.11	$2,500,000	$510,000
Median	$3,000	3.50	$1,400,000	$3,000
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	0.15	$60,000	$1,000
Maximum	$14,000,000	29.00	$11,600,000	$6,500,000
Count of Zero Responses	11	6	6	8
Count of Blank Responses	0	0	0	0

Table 6: Current Costs: Small Non-OATS Respondents Summary (88 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$900	1.08	$430,000	$2,900
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$3,000	3.00	$1,200,000	$3,000
Maximum	$72,000	68.00	$27,300,000	$220,000
Count of Zero Responses	85	83	83	85
Count of Blank Responses	0	0	0	0

To understand the current costs associated with regulatory reporting and estimate the direct costs associated with the CAT NMS Plan, the Participants also conducted the Costs to Vendors Study. CAT Reporters may currently rely on third-parties to provide key services necessary to meet the reporting obligations. Smaller broker-dealers may rely wholly or in part on third-party providers for the infrastructure to manage and maintain their electronic records, including all of the data required for audit trail reporting. Larger broker-dealers and Participants may augment their own internal IT capacity and capabilities by purchasing the services of one or more third-party vendor. As a result, it is important to understand the current reporting cost as well as the likely impact of SEC Rule 613 on these vendors and to include them in the estimate of aggregate economic impacts.

The Participants received five completed responses to the Costs to Vendors Study. One of the respondents indicated that the vendor did not currently have any reporting expenses on behalf of its clients and did not expect to face any costs under the CAT. Of the remaining responses, three respondents supported more than 100 clients, and one supported between 50 and 99 clients. Two of the respondents supported up to 25 million accounts, and two supported up to 50 million accounts. Two of the respondents serviced clients with institutional and retail businesses, while the remaining two supported clients with institutional businesses only.

For equity order reporting, two respondents indicated that they process up to 1 million equity orders per day on behalf of their clients, and two respondents indicated that they process up to 2 million equity orders per day on behalf of their clients. For options order reporting, three respondents indicated that they report up to 1 million options orders per day on behalf of their clients, and one respondent indicated that it reports up to 2 million options orders per day on behalf of its clients. All four respondents indicated that they report between 3 million and 100 million OATS reportable order events[198] per day on behalf of their clients. Three of the four respondents submitted EBS reports for their clients, with two submitting up to 200 responses per month and one submitting up to 400 responses per month.

Reported costs for current regulatory reporting for vendors varied widely across both dollar costs and FTE requirements. Each respondent provided an FTE rate associated with their FTE requirements; therefore, FTE costs for the vendors are reported using rates provided by each respondent. Dollar costs for hardware and software ranged from $50,000 to $15,000,000, and FTE requirements (cost) ranged from 11 ($2,700,000) to 92 ($8,600,000). While the respondent with the largest number of clients reported the highest costs, costs did not always correlate uniformly with the number of clients for other firms.

(iii) Estimated Costs, Benefits, and Other Economic Impacts of the CAT NMS Plan on Affected Parties

As required by SEC Rule 613(a)(1)(vii), this section provides detailed estimated costs for creating, implementing, and maintaining the CAT, specifying (1) an estimate of the costs to Participants for establishing and maintaining the CAT; (2) an estimate of the costs to members of the Participants, initially and on an ongoing basis, for reporting the data required by the CAT NMS Plan; (3) an estimate of the costs to the Participants, initially and on an ongoing basis, for reporting the data required by the CAT NMS Plan; and (4) the Participants' proposal to fund the creation, implementation, and maintenance of the CAT, including the proposed allocation of such estimated costs among the Participants, and between the Participants and members of the Participants. The Participants are sensitive to the economic impacts of SEC Rule 613. Throughout the development of the CAT NMS Plan, the Participants have continued to focus on minimizing the costs associated with the CAT. The Participants note that the figures presented in this analysis are estimates based on research completed and currently available data and are inherently subject to uncertainties.

Through the RFP, review of proposals received, and interaction with industry, the Participants have identified the sources of the costs associated with the CAT NMS Plan. These include direct costs associated with creating, implementing and maintaining the CAT necessary to meet the requirements of the CAT NMS Plan. There are also direct costs associated with developing and adapting applicable CAT Reporter systems to meet the requirements of the CAT NMS Plan and comply with the Plan on an ongoing basis. Additionally, Participants and broker-dealers may incur direct costs associated with the retirement of redundant reporting systems, although there may also be significant savings to broker-dealers associated with retiring those systems over time.

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[198] *See* FINRA, OATS Frequently Asked Questions at D8 (last updated July 6, 1998), *available at* http://www.finra.org/Industry/Compliance/MarketTransparency/OATS/FAQ/P085541.

In order to meet the responsibilities outlined in SEC Rule 613, the Participants have accrued, and will continue to accrue, direct costs associated with the development of the CAT NMS Plan. These costs include staff time contributed by each Participant to, among other things, determine the technological requirements for the Central Repository, develop the RFP, evaluate Bids received, design and collect the data necessary to evaluate costs and other economic impacts, meet with Industry Members to solicit feedback, and complete the CAT NMS Plan submitted to the Commission for consideration. The Participants estimate that they have collectively contributed 20 FTEs in the first 30 months of the CAT NMS Plan development process. In addition, the Participants have incurred public relations, legal, and consulting costs in the preparation of the CAT NMS Plan. The Participants estimate the costs of these services to be $8,800,000. These public relations, legal, and consulting costs are considered reasonably associated with creating, implementing, and maintaining the CAT upon the Commission's adoption of the CAT NMS Plan.

Given the size and scope of the CAT initiative, estimating the costs of the creation, implementation and maintenance of the CAT is a complex task, and one that necessarily relies on input from parties not directly charged under SEC Rule 613 with the responsibility to create and file the CAT NMS Plan. In light of this, the Participants have used a multi-pronged approach to assess the potential costs of the CAT. Among other things, the Participants have evaluated the many cost-related comments received in response to the Commission's rule proposal for SEC Rule 613 and during the CAT NMS Plan development process. In addition, the Participants have considered cost analyses and considerations provided by Bidders as well as the views and related information provided by the DAG and written feedback from the SIFMA and the FIF.

The economic baseline against which the potential costs and benefits of the CAT must be compared are discussed above in Section B(7)(b)(ii). The potential impacts and estimated costs of the CAT are discussed separately below, presenting study results where applicable.

(A) Investors

Approximately 52% of Americans hold individual stocks, stock mutual funds or stocks through their retirement plan,[199] and the retail options industry continues to grow.[200]

Investors benefit from the protections provided through the use of audit trail data, permitting regulators to adequately and effectively monitor activities in today's complex securities markets. In SEC Rule 613, the Commission identified several ways that the CAT would enhance the protections to investors. These include: facilitating risk-based examinations, better identification of potentially manipulative trading activity, improved processes for evaluating tips, complaints and referrals of potential misconduct made to regulators, increased efficiency of cross-market and principal order surveillance, improved analysis and reconstruction of broad-based market events, improved ability to monitor and evaluate changes to market structure, and efficiencies from a potential reduction in disparate reporting requirements and data requests.

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[199] *See* Hibah Yousuf, *Only Half of All Americans Invested in Stocks*, CNN Money (May 9, 2014), http://money.cnn.com/2013/05/09/investing/american-stock-ownership/ (includes Gallup Poll results).

[200] *See, e.g.*, Andy Nybo, *The Retail Options Renaissance*, TABB Forum (Jan. 27, 2014), http://tabbforum.com/opinions/the-retail-options-reneissance.

For instance, as shown in academic literature, surveillance has been demonstrated to increase investor confidence, by mitigating manipulative behavior and increasing trading activity.[201] Academic literature provides support for the notion that investors associate enhanced surveillance with greater investment opportunity across a larger number of listed companies and with higher market capitalizations.[202] Cross-market surveillance – an opportunity expected to be improved by CAT – is likely more effective in detecting manipulative behavior than single-market surveillance. A more recent study provides evidence that better surveillance is associated with reduced insider trading, as it would be harder to hide such trades.[203]

To the extent that better surveillance leads to more effective rulemaking,[204] investors should also benefit from the improvements in market quality that might arise from such rulemaking. For example, one study shows that detailed trading rules are positively correlated with liquidity measures evidenced by lower volatility and bid-ask spreads.[205] Similarly, a separate study finds that European Union countries that have more effective rules to prevent market abuse and enhance transparency experience higher market liquidity.[206]

Investors may also bear the costs associated with maintaining and enhancing the current audit trail systems. In some cases, broker-dealers may pass on regulatory charges that support Participant supervision, such as with respect to Section 31 fees.[207] In other cases, broker-dealers may cover some of their regulatory charges through commissions and other charges. Similarly, broker-dealers may seek to pass on to investors their costs to build and maintain the CAT, which may include their own costs and any costs passed on to them by Participants. This analysis does not measure either the likelihood of these costs being passed through to investors nor the potential dollar impact on investors. The extent to which these costs are passed on to investors depends on the materiality of the costs and the ease with which investors can substitute away from any given broker-dealer.

(B) Participants

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[201] Cumming et al., *Global Market Surveillance*, 10(2) Am. Law & Econ. Rev. at 454-506 (July 24, 2008).

[202] *See, e.g.*, La Porta, et al., *Legal Determinants of External Finance*, 52(3) J. Finance 1131-1150 (1997).

[203] Cumming et al., *Exchange Trading Rules, Surveillance and Insider Trading* (working paper, Oct. 29, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2101826.

[204] Where better surveillance identifies behaviors and practices that are manipulative and harmful to the investing public more quickly and more accurately, the Commission and Participants may be able to adopt rules to stop these practices more quickly and in a more tailored fashion.

[205] Cumming et al., *Exchange Trading Rules and Stock Market Liquidity*, 99(3) J. Financial Economics 651-71 (Mar. 2011).

[206] Christensen et al., *Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement* (Dec. 31, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1745105.

[207] Pursuant to Section 31 of the Exchange Act, Participants are required to pay transaction fees and assessments to the Commission that are designed to recover the costs related to the government's supervision and regulation of the securities markets and securities professionals. Participants, in turn, may collect their Section 31 fees and assessments from their broker-dealer members. 15 U.S.C. § 78ee.

Participants are expected to benefit from the requirements to report to the Central Repository. To the extent that the CAT enhances comparability of audit trail data – thereby enhancing order lifecycle comparability across different trading venues – Participants may better fulfill their obligations to "prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities" as set forth in Section 6 of the Exchange Act.

Participants would also incur direct costs associated with creating, implementing and maintaining the CAT infrastructure. The full cost associated with the build and maintenance of the CAT would be shared among Participants and Industry Members, consistent with the CAT NMS Plan. Participants would also be subject to costs associated with updating and maintaining their own systems to comply with their obligations to report to the Central Repository.

(1) Central Repository Build and Maintenance Costs

The CAT NMS Plan provides that the costs arising from the build and maintenance of the CAT will be collected from all CAT Reporters, which includes Participants. As described in Article XI of the CAT NMS Plan and in Section C(b)(7)(iii)below, Participants will be required to pay their allocated portion of these costs on an annual basis.

The CAT NMS Plan also contemplates that Participants may impose greater requirements on the Central Repository based on their use of information in the repository for regulatory purposes. These requirements may take the form of frequent and complex analyses of data which may likely require more resources from the Central Repository. It is critical that the Company recover its costs in a manner consistent with the principles articulated in the CAT NMS Plan, which include both the need to allocate costs in a manner consistent with the cost to operations and that the CAT NMS Plan not create significant disincentives to Participants in seeking to meet their regulatory obligations. As such, the CAT NMS Plan permits the Company to assess additional charges to Participants associated with their use of the Central Repository's data and reporting facilities as it deems necessary.

(2) Costs to Participants to Meet Reporting Requirements

The Costs to Participants Study was distributed to the Participants to collect information about the potential costs of the CAT to the Participants. The Costs to Participants Study was designed to provide insight into the current total costs associated with regulatory reporting and surveillance programs discussed above, as well as expected implementation and maintenance costs associated with reporting to and surveillance through the Central Repository.

The anticipated costs associated with the implementation of regulatory reporting to the Central Repository were estimated to be a total of $17,900,000 across all ten Participants. Included in this cost, Participants reported a total of $770,000 in legal and consulting costs, as well as total FTE costs of $10,300,000 for operational, technical/development and compliance-type functions.

Maintenance costs associated with regulatory reporting to Central Repository were estimated to be a total of $14,700,000 across all ten Participants. Included in this estimate are legal, consulting, and other costs associated with maintenance, a total of $720,000, and $7,300,000 to FTEs for operational, technical/development, and compliance functions regarding the maintenance of regulatory reporting associated with CAT.

The Participants were also asked to identify the costs associated with the implementation of surveillance programs within the Central Repository. The estimated total costs across all ten Participants were $23,200,000 including estimated legal, consulting, and other costs of $560,000. Also included in the total, Participants reported that they would allocate a total of $17,500,000 to FTEs to operational, technical/development, and compliance staff to be engaged in the creation of surveillance programs.

The estimated total costs associated with the maintenance of surveillance programs were $87,700,000, including $1,000,000 for legal, consulting, and other costs. Of the total cost, the Participants estimated that they would allocate a total of $66,700,000 to FTEs to operational, technical/development and compliance staff.

Retirement costs for current systems were estimated to be $310,000 across all Participants. However, Participants expect that by no longer needing to maintain these legacy systems due to adoption of the CAT, they will realize aggregate savings of $10,600,000, which will partially offset some of the costs expected to be borne by the Participants as described further below. To the extent that the Participants are able to retire legacy systems and replace them with more efficient and cost effective technologies, they may experience additional cost savings. The Costs to Participants Study does not attempt to quantify any such additional cost savings to broker-dealers.

(C) Broker-Dealers

The CAT is expected to provide a more resilient audit trail system that may benefit broker-dealers. For instance, as noted above, more effective oversight of market activity may increase investor confidence and help expand the investment opportunity set through increased listings. Broker-dealers may benefit from increased investor confidence, provided that it results in increased trading activity. In addition, broker-dealers may experience less burden, to the extent that, data provided to the Central Repository reduces the number of direct requests by regulators for their surveillance, examination and enforcement programs. For example, after the implementation of CAT, regulators seeking to identify activity for NMS Securities at the customer account level, would access that information from the Central Repository, rather than making a Blue Sheet request.

More broadly, one benefit identified to broker-dealers of the CAT may arise from consolidating the collection and transmission of audit trail data into a uniform activity, regardless of where the quoting and trading occur. Such a consolidation may permit some broker-dealers to reduce the number of systems they operate to provide audit trail data to Participants and to retire legacy systems, at an appropriate time. Additionally, technological advances may make the operation of the new CAT Systems more efficient than those associated with the legacy systems. The Costs to CAT Reporters Study did not attempt to quantify any such cost savings to firms, and as such, the cost estimates provided here do not include consideration that such cost savings may be low.

Broker-dealers would also incur costs associated with creating, implementing and maintaining the CAT infrastructure. These costs would arise from building and maintaining the CAT and updating and maintaining their own systems to comply with their reporting obligations.

(1) CAT Build and Maintenance Costs

Broker-dealers will also be required to contribute their portion of the direct costs associated with building and maintaining the CAT, as required by SEC Rule 613 and implemented by the CAT NMS Plan. Broker-dealers with CAT reporting obligations will be required to pay their allocated portion of these costs on an annual basis, pursuant to the Funding Model.

The Funding Model acknowledges that the operating models of broker-dealers and Execution Venues are substantially different. Therefore, the Funding Model imposes different fee structures for broker-dealers and Executions Venues. ATSs that execute orders, which are operated by registered broker-dealers pursuant to Regulation ATS, are considered Execution Venues, for purposes of the CAT NMS Plan.

(2) CAT Reporters Costs to Meeting Reporting Requirements

Responses to the Costs to CAT Reporters Study provide estimates of the direct costs to broker-dealers associated with meeting requirements to report to the Central Repository. The Costs to CAT Reporters Study contained questions related to future costs related to both the retirement of existing systems and compliance with requirements of SEC Rule 613.

Respondents were asked to evaluate the future costs under two separate approaches.[208] For each approach, respondents were asked to estimate both for CAT implementation and maintenance: (1) the associated hardware and software costs; (2) the number of required FTEs; and (3) third-party provider costs.

a. Implementation Phase of Approach 1

Tables 7 and 8 describe the costs associated with the implementation of Approach 1. Based on the 167 study responses for the implementation of Approach 1, large firms provided an average (medium) hardware / software cost of $580,000 ($0) and small firms provided an average (median) cost estimates of $5,200 ($0).

Large firms provided an average (median) FTE count of 11.00 (0.00). Multiplying these counts by the rate employed by the Commission in SEC Rule 613 as described above, FTE costs are estimated as $4,400,000, with a median FTE cost of $0. Small firms provided an average FTE count requirement of 1.17, with the median response provided by small respondents equal to 0.00.

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[208] The two approaches are described in detail in Appendix C, Analysis of Expected Benefits and Estimated Costs for Creating, Implementing, and Maintaining the Consolidated Audit Trail (SEC Rule 613(a)(1)(vii)).

Participants estimate a dollar cost for the small respondent FTE requirements to be on average $470,000, with a median estimated cost of $0.

Participants estimate large firms would incur average (median) third party / outsourcing costs of $72,000 ($0) and small firms would incur an estimated average (median) cost of $76,000 ($0).

Total average (median) costs for Approach 1 Implementation are estimated to be $5,052,000 ($0) for large firms, and $551,200 ($0) for small firms.

Table 7: Approach 1 Implementation Costs: Large Respondents Summary (49 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$580,000	11.00	$4,400,000	$72,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$5,000	0.02	$8,000	$1,000
Maximum	$10,000,000	142.00	$57,000,000	$2,000,000
Count of Zero Responses	28	27	27	41
Count of Blank Responses	0	0	0	0

Table 8: Approach 1 Implementation Costs: Small Respondents Summary (118 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$5,200	1.17	$470,000	$76,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	0.20	$80,000	$1,000
Maximum	$500,000	20.00	$8,000,000	$8,000,000
Count of Zero Responses	95	94	94	95
Count of Blank Responses	2	0	0	1

Tables 9 and 10 describe the costs associated with the implementation of Approach 1 for large respondents with current OATS and non-OATS reporting obligations. Large OATS respondents provided an average (median) hardware / software cost estimate of $750,000 ($0), and large non-OATS respondents providing average (median) estimated costs of $450,000 ($0).

Large OATS reporters provided an average (median) FTE requirement of 14.92 (7.00), translating into estimated costs of $6,000,000 ($2,800,000), while large non-OATS respondents provided an average (median) FTE requirement of 8.05 (0.00), translating into an average (median) estimated cost of $3,200,000 ($0).

Large OATS respondents estimated an average (median) third party / outsourcing cost of $150,000 ($0), while large non-OATS respondents provided an average (median) estimate of $9,500 ($0).

Table 9: Approach 1 Implementation Costs: Large OATS Respondents Summary (21 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$750,000	14.92	$6,000,000	$150,000
Median	$60,000	7.00	$2,800,000	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$5,000	0.02	$8,000	$1,000
Maximum	$7,000,000	63.00	$25,300,000	$2,000,000
Count of Zero Responses	6	5	5	15
Count of Blank Responses	0	0	0	0

Table 10: Approach 1 Implementation Costs: Large Non-OATS Respondents Summary (28 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$450,000	8.05	$3,200,000	$9,500
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$5,000	1.00	$400,000	$15,000
Maximum	$10,000,000	142.00	$57,000,000	$250,000
Count of Zero Responses	22	22	22	26
Count of Blank Responses	0	0	0	0

Tables 11 and 12 describe the costs associated with the implementation of Approach 1 for small respondents with current OATS and non-OATS reporting obligations, small OATS respondents provided an average (median) hardware / software cost estimate of $21,000 ($1,000), with small non-OATS respondents providing an estimated average (median) cost of $100 ($0).

Small OATS reporters provided an average (median) FTE requirement of 3.51 (2.00), translating into estimated an average (median) costs of $1,400,000 ($800,000), while small non-OATS respondents provided an average (median) FTE requirement of 0.38 (0.00), translating into an estimated average (median) cost of $150,000 ($0).

Finally, small OATS respondents estimated an average (median) third party / outsourcing cost of $300,000 ($1,000), while small non-OATS respondents provided an average (median) estimate of $1,100 ($0).

Table 11: Approach 1 Implementation Costs: Small OATS Respondents Summary (30 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$21,000	3.51	$1,400,000	$300,000
Median	$1,000	2.00	$800,000	$1,000
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	0.20	$80,000	$1,000
Maximum	$500,000	20.00	$8,000,000	$8,000,000
Count of Zero Responses	12	12	12	12
Count of Blank Responses	1	0	0	1

Table 12: Approach 1 Implementation Costs: Small Non-OATS Respondents Summary (88 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$100	0.38	$150,000	$1,100
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	3.00	$1,200,000	$1,000
Maximum	$5,000	15.00	$6,000,000	$72,000
Count of Zero Responses	83	82	82	83
Count of Blank Responses	1	0	0	0

b. Maintenance Phase of Approach 1

Tables 13 and 14 describe the costs associated with the maintenance of CAT reporting obligations for the full set of study responses under Approach 1. Based on the 167 study responses for the maintenance of Approach 1, large firms reported an average (median) hardware / software cost estimate of $210,000 ($0), and small firms reported an estimated cost of $1,600 ($0).

Large firms provided an average FTE count requirement of 8.54, with the median response provided by large firms equaled to 0.00. Multiplying these counts by the rate employed by the

Commission in SEC Rule 613 as described above, FTE costs are estimated to be $3,400,000, with a median FTE cost of $0. Small firms provided an average FTE count requirement of 1.12, with the median response provided by small respondents equal to 0.00. Participants estimated the average dollar cost for the small respondent FTE requirement 1 to be $450,000, and a median cost of $0.

Large firms estimated that the average (median) third party / outsourcing cost is equal to $52,000 ($0) and small firms estimated average (median) costs to be equal to $24,000 ($0).

Total average (median) costs for Approach 1 Maintenance are estimated to be $3,662,000 ($0) for large firms and $475,600 ($0) for small firms.

Table 13: Approach 1 Maintenance Costs: Large Respondents Summary (49 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$210,000	8.54	$3,400,000	$52,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$2,000	0.02	$8,000	$1,000
Maximum	$5,200,000	152.00	$61,000,000	$1,000,000
Count of Zero Responses	28	27	27	41
Count of Blank Responses	1	0	0	0

Table 14: Approach 1 Maintenance Costs: Small Respondents Summary (118 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$1,600	1.12	$450,000	$24,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$500	0.15	$60,000	$500
Maximum	$120,000	18.00	$7,200,000	$1,500,000
Count of Zero Responses	96	93	93	96
Count of Blank Responses	0	0	0	0

Tables 15 and 16 show the costs associated with the maintenance of CAT reporting obligations for Approach 1 for large respondents with current OATS and non-OATS reporting obligations. Large OATS respondents provided estimated average (median) hardware / software requirements of $380,000 ($22,000), with large non-OATS respondents providing estimated average (median) costs of $80,000 ($0).

Large OATS reporters provided average (median) FTE requirements of 10.03 (4.00), translating to estimated costs of $4,000,000 ($1,600,000), while large non-OATS respondents provided average (median) FTE requirements of 7.41 (0.00), translating to estimated costs of $3,000,000 ($0).

Large OATS respondents estimated average (median) third party / outsourcing costs of $120,000 ($0), while large non-OATS respondents provided estimates of $1,300 ($0).

Table 15: Approach 1 Maintenance Costs: Large OATS Respondents Summary (21 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$380,000	10.03	$4,000,000	$120,000
Median	$22,000	4.00	$1,600,000	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$2,000	0.02	$8,000	$1,000
Maximum	$5,200,000	50.00	$20,100,000	$1,000,000
Count of Zero Responses	6	5	5	14
Count of Blank Responses	1	0	0	0

Table 16: Approach 1 Maintenance Costs: Large Non-OATS Respondents Summary (28 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$80,000	7.41	$3,000,000	$1,300
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$8,000	1.00	$400,000	$35,000
Maximum	$900,000	152.00	$61,000,000	$35,000
Count of Zero Responses	22	22	22	27
Count of Blank Responses	0	0	0	0

Tables 17 and 18 describe the costs associated with the maintenance of CAT reporting obligations for Approach 1 for small respondents with current OATS and non-OATS reporting obligations. Small OATS respondents provided estimated average (median) hardware / software requirements of $6,000 ($1,000), with small non-OATS respondents providing estimated average (median) costs of $100 ($0).

Small OATS reporters provided average (median) FTE requirements of 3.52 (2.00), translating to estimated costs of $1,400,000 ($800,000), while small non-OATS respondents provided average (median) FTE requirements of 0.31 (0.00), translating to estimated costs of $120,000 ($0).

Finally, small OATS respondents estimated average (median) third party / outsourcing costs of $90,000 ($1,000), while small non-OATS respondents provided estimates of $1,100 ($0).

Table 17: Approach 1 Maintenance Costs: Small OATS Respondents Summary (30 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$6,000	3.52	$1,400,000	$90,000
Median	$1,000	2.00	$800,000	$1,000
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$500	0.15	$60,000	$500
Maximum	$120,000	18.00	$7,200,000	$1,500,000
Count of Zero Responses	12	10	10	12
Count of Blank Responses	0	0	0	0

Table 18: Approach 1 Maintenance Costs: Small Non-OATS Respondents Summary (88 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$100	0.31	$120,000	$1,100
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	3.00	$1,200,000	$1,000
Maximum	$2,000	14.00	$5,600,000	$72,000
Count of Zero Responses	84	83	83	84
Count of Blank Responses	0	0	0	0

c. Implementation Phase of Approach 2

Tables 19 and 20 show the costs associated with the implementation phase of Approach 2 for the full set of study responses. Based on the 167 study responses for the implementation phase of Approach 2, large firms provided average (median) hardware / software costs of $570,000 ($0), and small firms provided costs estimates of $5,000 ($0).

Large firms provided average FTE count requirements of 10.15, with the median response provided by a large firm equal to 0.00. Multiplying these counts by the rate employed by the Commission in SEC Rule 613 as described above, FTE costs can be estimated to be $4,100,000, with a median FTE cost of $0. Small firms provided average FTE count requirements of 1.08, with the median response provided by a small respondent equal to 0.00. Participants estimate the dollar cost for the small respondent FTE requirements to be $440,000, and a median cost of $0.

Large firms estimated that average (median) third party / outsourcing costs are equal to $68,000 ($0) and small firms estimated average (median) costs to be equal to $16,000 ($0).

Total average (median) costs for Approach 2 Implementation are estimated to be $4,738,000 ($0) for large firms, and $461,000 ($0) for small firms.

Table 19: Approach 2 Implementation Costs: Large Respondents Summary (49 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$570,000	10.15	$4,100,000	$68,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$5,000	0.02	$8,000	$1,000
Maximum	$10,000,000	116.00	$46,600,000	$2,000,000
Count of Zero Responses	28	28	28	41
Count of Blank Responses	0	0	0	0

Table 20: Approach 2 Implementation Costs: Small Respondents Summary (118 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$5,000	1.08	$440,000	$16,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	1.00	$400,000	$1,000
Maximum	$500,000	20.00	$8,000,000	$1,000,000
Count of Zero Responses	98	96	96	97
Count of Blank Responses	1	0	0	1

Tables 21 and 22 show the costs associated with the implementation phase of Approach 2 for large respondents with current OATS and non-OATS reporting obligations. Large OATS respondents provided estimated average (median) hardware / software requirements of $740,000 ($60,000), with large non-OATS respondents providing estimated average (median) costs of $450,000 ($0).

Large OATS reporters provided average (median) FTE requirements of 14.81 (7.00), translating to estimated costs of $5,900,000 ($2,800,000), while large non-OATS respondents provided average (median) FTE requirements of 6.66 (0.00), translating to estimated costs of $2,700,000 ($0).

Finally, large OATS respondents estimated average (median) third party / outsourcing costs of $140,000 ($0), while large non-OATS respondents provided estimates of $10,000 ($0).

Table 21: Approach 2 Implementation Costs: Large OATS Respondents Summary (21 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$740,000	14.81	$5,900,000	$140,000
Median	$60,000	7.00	$2,800,000	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$5,000	0.02	$8,000	$1,000
Maximum	$7,000,000	63.00	$25,300,000	$2,000,000
Count of Zero Responses	6	5	5	15
Count of Blank Responses	0	0	0	0

Table 22: Approach 2 Implementation Costs: Large Non-OATS Respondents Summary (28 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$450,000	6.66	$2,700,000	$10,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$5,000	1.00	$400,000	$35,000
Maximum	$10,000,000	116.00	$46,600,000	$250,000
Count of Zero Responses	22	23	23	26
Count of Blank Responses	0	0	0	0

Tables 23 and 24 show the costs associated with the implementation of Approach 2 for small respondents with current OATS and non-OATS reporting obligations. Small OATS respondents provided estimated average (median) hardware / software requirements of $20,000 ($1,000), with small non-OATS respondents providing estimated average (median) costs of $100 ($0).

Small OATS reporters provided average (median) FTE requirements of 3.33 (2.00), translating to estimated costs of $1,300,000 ($800,000), while small non-OATS respondents provided average (median) FTE requirements of 0.32 (0.00), translating to estimated costs of $130,000 ($0).

Finally, small OATS respondents estimated average (median) third party / outsourcing costs of $60,000 ($1,000), while small non-OATS respondents provided estimates of $1,100 ($0).

Table 23: Approach 2 Implementation Costs: Small OATS Respondents Summary (30 Firms)				
	Hardware / Software	**FTE Counts**	**FTE Costs**	**Third Party / Outsourcing**
Average	$20,000	3.33	$1,300,000	$60,000
Median	$1,000	2.00	$800,000	$1,000
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	1.00	$400,000	$1,000
Maximum	$500,000	20.00	$8,000,000	$1,000,000
Count of Zero Responses	14	13	13	13
Count of Blank Responses	1	0	0	1

Table 24: Approach 2 Implementation Costs: Small Non-OATS Respondents Summary (88 Firms)				
	Hardware / Software	**FTE Counts**	**FTE Costs**	**Third Party / Outsourcing**
Average	$100	0.32	$130,000	$1,100
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	3.00	$1,200,000	$1,000
Maximum	$5,000	15.00	$6,000,000	$72,000
Count of Zero Responses	84	83	83	84
Count of Blank Responses	0	0	0	0

d. Maintenance Phase of Approach 2

Tables 25 and 26 show the costs associated with the maintenance of CAT reporting obligations for Approach 2 for the full set of study responses. Based on the 167 study responses for the maintenance phase of Approach 2, large firms provided average (median) hardware / software costs of $200,000 ($0) and small firms provided costs estimates of $1,500 ($0).

Large firms provided average FTE count requirements of 7.27, with the median response provided by a large firm equal to 0.00. Multiplying these counts by the rate employed by the Commission in SEC Rule 613 as described above, FTE costs can be estimated to be $2,900,000, with a median FTE cost of $0. Small firms provided average FTE count requirements of 1.06, with the median response provided by a small respondent equal to 0.00. Participants estimate the dollar cost for the small respondent FTE requirements to be $430,000, with a median cost of $0.

Large firms estimated that average (median) third party / outsourcing costs are equal to $48,000 ($0) and small firms estimated average (median) costs to be equal to $10,000 ($0).

Total average (median) costs for Approach 2 Maintenance are estimated to be $3,148,000 ($0) for large firms, and $441,500 ($0) for small firms.

Table 25: Approach 2 Maintenance Costs: Large Respondents Summary (49 Firms)

	Hardware / Software	**FTE Counts**	**FTE Costs**	**Third Party / Outsourcing**
Average	$200,000	7.27	$2,900,000	$48,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$2,000	0.00	$0	$1,000
Maximum	$5,200,000	102.00	$40,900,000	$1,000,000
Count of Zero Responses	28	28	28	41
Count of Blank Responses	1	0	0	0

Table 26: Approach 2 Maintenance Costs: Small Respondents Summary (118 Firms)

	Hardware / Software	**FTE Counts**	**FTE Costs**	**Third Party / Outsourcing**
Average	$1,500	1.06	$430,000	$10,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$500	1.00	$400,000	$500
Maximum	$100,000	18.00	$7,000,000	$1,000,000
Count of Zero Responses	97	94	94	93
Count of Blank Responses	2	0	0	5

Tables 27 and 28 provide the costs associated with the maintenance of CAT reporting obligations for Approach 2 for large respondents with current OATS and non-OATS reporting obligations. Large OATS respondents provided estimated average (median) hardware / software requirements of $370,000 ($14,000), with large non-OATS respondents providing estimated average (median) costs of $79,000 ($0).

Large OATS reporters provided average (median) FTE requirements of 9.79 (5.60), translating to estimated costs of $3,900,000 ($2,200,000), while large non-OATS respondents provided average (median) FTE requirements of 5.38 (0.00), translating to estimated costs of $2,200,000 ($0).

Finally, large OATS respondents estimated average (maximum) third party / outsourcing costs of $110,000 ($0), while large non-OATS respondents provided estimates of $1,300 ($0).

Table 27: Approach 2 Maintenance Costs: Large OATS Respondents Summary (21 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$370,000	9.79	$3,900,000	$110,000
Median	$14,000	5.60	$2,200,000	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$2,000	0.02	$8,000	$1,000
Maximum	$5,200,000	50.00	$20,100,000	$1,000,000
Count of Zero Responses	6	5	5	14
Count of Blank Responses	1	0	0	0

Table 28: Approach 2 Maintenance Costs: Large Non-OATS Respondents Summary (28 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$79,000	5.38	$2,200,000	$1,300
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$3,000	1.00	$400,000	$36,000
Maximum	$900,000	102.00	$40,900,000	$36,000
Count of Zero Responses	22	23	23	27
Count of Blank Responses	0	0	0	0

Tables 29 and 30 show the costs associated with the maintenance of CAT reporting obligations for Approach 2 for small respondents with current OATS and non-OATS reporting obligations. Small OATS respondents provided estimated average (median) hardware / software requirements of $6,000 ($500), with small non-OATS respondents providing estimated average (median) costs of $100 ($0).

Small OATS reporters provided average (median) FTE requirements of 3.28 (2.00), translating to estimated costs of $1,300,000 ($800,000), while small non-OATS respondents provided average (median) FTE requirements of 0.31 (0.00), translating to estimated costs of $120,000 ($0).

Finally, small OATS respondents estimated average (median) third party / outsourcing costs of $42,000 ($1,000), while small non-OATS respondents provided estimates of $1,100 ($0).

Table 29: Approach 2 Maintenance Costs: Small OATS Respondents Summary (30 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$6,000	3.28	$1,300,000	$42,000
Median	$500	2.00	$800,000	$1,000
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$500	1.00	$400,000	$500
Maximum	$120,000	18.00	$7,000,000	$1,000,000
Count of Zero Responses	14	11	11	12
Count of Blank Responses	1	0	0	2

Table 30: Approach 2 Maintenance Costs: Small Non-OATS Respondents Summary (88 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$100	0.31	$120,000	$1,100
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	3.00	$1,200,000	$1,000
Maximum	$2,000	14.00	$5,600,000	$72,000
Count of Zero Responses	83	83	83	81
Count of Blank Responses	1	0	0	3

e. Implementation and Maintenance Costs for Approach 1 vs. Approach 2

Participants compared the estimated implementation and maintenance costs for Approach 1 and Approach 2 to determine if one solution would be more cost effective for the industry than the other. In general, respondents indicated that Approach 1 would lead to larger costs than Approach 2. Large firms estimated that it will cost approximately $5,052,000 to implement Approach 1, versus an estimated $4,738,000 for Approach 2, a cost difference of $314,000. From a maintenance perspective, large firms estimated that it would cost $3,662,000 for Approach 1 versus $3,148,000 for Approach 2, a cost difference of $514,000. Small firms also indicated that Approach 1 would be more expensive to implement and maintain than Approach 2. Small firms indicated that it would cost $551,200 to implement Approach 1 versus $475,600 for Approach 2, indicating a cost difference of $90,200. For the maintenance phases, small firms estimated it would cost approximately $475,600 for Approach 1 maintenance, versus $441,500 for Approach 2 maintenance, a cost difference of $34,100 between approaches. However, the cost estimates between these two approaches are not statistically significant and Participants conclude that there would likely be no incremental costs associated with either Approach.[209]

f. Retirement of Systems Costs

Participants recognize that in implementing the anticipated requirements in the CAT NMS Plan, broker-dealers would likely replace some components of their current systems. The costs associated with retiring current systems were considered as part of the impacts associated with the CAT NMS Plan.

Tables 31 and 32 describe the cost associated with retirement of systems for the full set of study responses. Based on the 167 study responses for the retirement of systems large firms provided average (median) hardware / software costs of $120,000 ($0) and small firms provided cost estimates of $31,000 ($0).

Large firms provided average FTE count requirements of 6.80, with the median response provided by a large firm equal to 0.00. Multiplying these counts by the rate employed by the Commission in SEC Rule 613 as described above, FTE costs are estimated to be $2,700,000, with a median FTE cost of $0. Small firms provided average FTE count requirements of 1.92, with the median response provided by a small respondent of 0.00. Participants estimate the dollar cost for the small respondent FTE requirements to be an average costs of $770,000, and a median cost of $0.

Large firms estimated that average (median) third party / outsourcing costs to be $10,000 ($0) and small firms estimated average (median) costs to be $63,000 ($0).

Total average (median) costs for the Retirement of Systems are estimated to be $2,830,000 ($0) for large firms and $864,000 ($0) for small firms.

Table 31: Retirement of Systems Costs: Large Respondents Summary (49 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$120,000	6.80	$2,700,000	$10,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0

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[209] Participants arrive at this conclusion on the basis of a standard t-test of the hypothesis that the difference between Approach 1 and Approach 2 costs is different from zero. The t-test is unable to reject the null hypothesis (i.e., that the difference in costs between the two approaches is not distinguishable from zero) at the 0.05% level. The t-test rejects the null hypothesis for estimates of hardware / software costs, FTE costs, vendor costs, and total costs. The t-test also rejects any significant difference in estimated costs under the two approaches separately for large OATS reporters, small OATS reporters, large non-OATS reporters, and small non-OATS reporters.

Minimum (non-zero)	$1,500	0.06	$24,000	$5,000
Maximum	$4,000,000	206.00	$82,700,000	$360,000
Count of Zero Responses	37	32	32	44
Count of Blank Responses	0	0	0	0

Table 32: Retirement of Systems Costs: Small Respondents Summary (118 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$31,000	1.92	$770,000	$63,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	1.00	$400,000	$1,000
Maximum	$3,500,000	68.00	$27,300,000	$7,000,000
Count of Zero Responses	98	100	100	97
Count of Blank Responses	0	0	0	0

Tables 33 and 34 describe the costs associated with the retirement of systems for large respondents with current OATS and non-OATS reporting obligations. Large OATS respondents provided estimated average (median) hardware / software requirements of $270,000 ($0), with large non-OATS respondents providing estimated average (median) costs of $4,300 ($0).

Large OATS reporters provided average (median) FTE requirements of 4.92 (3.10), translating to estimated costs of $2,000,000 ($1,200,000), while large non-OATS respondents provided average (median) FTE requirements of 8.21 (0.00), translating to estimated costs of $3,300,000 ($0).

Finally, large OATS respondents estimated average (median) third party / outsourcing costs of $18,000 ($0), while large non-OATS respondents provided estimates of $4,800 ($0).

Table 33: Retirement of Systems Costs: Large OATS Respondents Summary (21 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$270,000	4.92	$2,000,000	$18,000
Median	$0	3.10	$1,200,000	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,500	0.06	$24,000	$5,000
Maximum	$4,000,000	33.00	$13,200,000	$360,000

Count of Zero Responses	11	6	6	18
Count of Blank Responses	0	0	0	0

Table 34: Retirement of Systems Costs: Large Non-OATS Respondents Summary (28 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$4,300	8.21	$3,300,000	$4,800
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$10,000	24.00	$9,600,000	$60,000
Maximum	$110,000	206.00	$82,700,000	$75,000
Count of Zero Responses	26	26	26	26
Count of Blank Responses	0	0	0	0

Tables 35 and 36 show the costs associated with the retirement of systems for small respondents with current OATS and non-OATS reporting obligations for the full set of study respondents. Small OATS respondents provided estimated average (median) hardware / software requirements of $3,600 ($500), with small non-OATS respondents providing estimated average (median) costs of $40,000 ($0).

Small OATS reporters provided average (median) FTE requirements of 4.60 (0.00), translating to estimated costs of $1,800,000 ($0), while small non-OATS respondents provided average (median) FTE requirements of 1.00 (0.00), translating to estimated costs of $400,000 ($0).

Finally, small OATS respondents estimated average (median) third party / outsourcing costs of $240,000 ($1,500), while small non-OATS respondents provided estimates of $3,000 ($0).

Table 35: Retirement of Systems Costs: Small OATS Respondents Summary (30 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$3,600	4.60	$1,800,000	$240,000
Median	$500	0.00	$0	$1,500
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	1.00	$400,000	$1,000
Maximum	$39,000	30.00	$12,000,000	$7,000,000
Count of Zero Responses	15	16	16	13

Count of Blank Responses	0	0	0	0

Table 36: Retirement of Systems Costs: Small Non-OATS Respondents Summary (88 Firms)

	Hardware / Software	FTE Counts	FTE Costs	Third Party / Outsourcing
Average	$40,000	1.00	$400,000	$3,000
Median	$0	0.00	$0	$0
Minimum	$0	0.00	$0	$0
Minimum (non-zero)	$1,000	3.00	$1,200,000	$3,000
Maximum	$3,500,000	68.00	$27,300,000	$220,000
Count of Zero Responses	83	84	84	84
Count of Blank Responses	0	0	0	0

In comparing the two approaches and their costs to the current costs incurred by a broker-dealer for current regulatory reporting, respondents have indicated that they estimate both Approach 1 and Approach 2 to be less expensive than current regulatory reporting requirements. Overall, firms estimated that current costs would be $4,290,000 for large firms versus $1,210,000 for small firms, while maintenance costs of Approach 1 for large firms would cost $3,662,000 and $475,600 for small firms, indicating cost savings of $628,000 for large firms and cost savings of $734,400 for small firms. For maintenance costs related to Approach 2, large firms indicated costs of $3,148,000 with an expected savings of $1,142,000 while small firms estimated maintenance costs of $441,500 with expected savings of $768,500.

Although there are differences in the current and anticipated maintenance costs discussed above, the Participants conclude that there would be no statistical difference in costs associated with the maintenance of the CAT, compared to maintenance costs for existing regulatory reporting requirements. Participants arrive at this conclusion on the basis of a standard t-test of the hypothesis that the difference in costs to broker-dealers between Approach 1 and Approach 2 is different from zero. The t-test is unable to reject the null hypothesis (i.e., that the difference in costs between the two approaches is not distinguishable from zero) at the 0.05% level separately for estimates of hardware / software costs, FTE costs, vendor costs, and total costs across large OATS reporters, small OATS reporters, large non-OATS reporters, and small non-OATS reporters.

g. Industry Feedback on Costs to CAT Reporters Study

Participants' understanding of broker-dealer costs has been enhanced through frequent dialogue with Industry Members. The DAG has largely provided written feedback on costs through the industry association members. In March 2013, SIFMA provided feedback on industry costs in its Consolidated Audit Trail White Paper.[210] The association group stated that the industry is likely to face costs related to upgrading the regulatory reporting infrastructure. SIFMA highlighted that additional costs borne will be distributed across the front office, middle office, customer master data, compliance and risk and data management. Additionally, in February 2012, the FIF conducted a study to assess the costs associated with the implementation of OATS.[211] In a summary of the study, FIF highlights that "future estimates of cost should consider the FIF cost model, most importantly the effort expended on business analysis and testing as part of the implementation effort." One key view presented by the DAG was that retiring legacy systems will likely reduce costs to the industry, given their redundancies with the CAT. However, the FIF highlighted that existing timelines do not take into account costs associated with concurrent reporting for existing regulatory reporting and new regulatory requirements associated with the Central Repository.[212] Additional detail around the plan to retire existing regulatory reports can be found in Appendix C, Section C.9.

(D) Vendors

The Costs to Vendors Study requested information regarding various third party service provider and vendor costs to comply with the requirements of SEC Rule 613.

Based upon the responses to the Costs to Vendors Study, the expected dollar costs for implementation and maintenance of the CAT are largely the same for both approaches, and ranged widely between $0 and $20,000,000 for implementation and $50,000 and $6,000,000 for ongoing maintenance. One firm did indicate that Approach 1 would have substantially higher maintenance costs ($400,000 for Approach 1 versus $50,000 for Approach 2). For headcount and costs associated with implementation and maintenance of the CAT, all respondents indicated that Approach 1 would require more FTE resources (costs) to implement (ranging from 14 ($9,600,000) to 170 ($35,900,000) FTEs for Approach 1 and from 4 ($2,700,000) to 45 ($24,200,000) for Approach 2), while Approach 2 would require more FTE resources to maintain (ranging from 4.5 ($4,100,000) to 35 ($9,300,000) for Approach 1 and from 2 ($2,500,000) to 56 ($11,200,000) for Approach 2). As with current regulatory reporting costs, the firm with the largest number of clients reported the highest costs, but number of clients did not always correlate uniformly with higher expected costs for the other firms.

Three of the four respondents to the vendor study indicated that they would incur costs to retire current regulatory reporting systems, with costs ranging from $500,000 to $5,000,000, with the firm with the highest expected retirement costs also having the highest current reporting costs. FTE requirements ranged from 1.5 ($250,000) to 23 ($7,200,000) FTEs.

Under Approach 1, two respondents expected ongoing maintenance to cost less than the maintenance of current regulatory reporting requirements, with the remaining two expecting higher costs. Under Approach 2, two respondents expected ongoing maintenance to cost less than the maintenance of current regulatory reporting requirements, one expected costs to be the same, and the final firm expected costs to be greater. All firms expected headcount associated with ongoing maintenance of the CAT to be less than under current reporting requirements.

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[210] *See* SIFMA Recommendations.

[211] *See* SEC Memorandum to File No. S7-11-10, Re: Staff Meeting with the Financial Information Forum (Feb. 29, 2012), *available at* http://www.sec.gov/comments/s7-11-10/s71110-112.pdf.

[212] *See* FIF, Comment Letter Re: Consolidated Audit Trail National Market System Plan Submission (Nov. 19, 2014), *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p601972.pdf.

(E) Issuers

Issuers also benefit from an effective regulatory regime supported by a reliable and complete audit trail. Specifically, issuers may benefit from enhanced investor confidence associated with better and more efficient oversight. The increase in investor confidence may draw more investors into the market, relative to other investment opportunities that do not provide the same protections. Increasing the pool of investors willing to invest in a primary offering may manifest itself in a lower cost of capital. Increased investor participation in secondary trading may also increase demand in the primary market, as the increased interest would be associated with greater efficiency in pricing and lower adverse selection costs. To the extent that the issuers do not have independent reporting obligations to the Central Repository (i.e., they are not otherwise CAT Reporters), they are not anticipated to incur direct costs associated with the CAT NMS Plan.

(F) Indirect Costs

The Participants recognize that in addition to direct costs, there may be indirect costs borne by parties as a result of the implementation of the CAT NMS Plan. As discussed further below, it is not possible for the Participants to quantify these costs, and as such, we present a qualitative discussion.

The Participants have identified at least three distinct ways for indirect costs to arise as a result of the implementation of the CAT NMS Plan. First, all CAT Reporters are subject to direct fees to pay for the creation, implementation, and maintenance of the CAT along with other direct costs to meet CAT NMS Plan obligations. CAT Reporters may endeavor to shift these fees and other costs to their clients. Where CAT Reporters can do so successfully, the clients bear an indirect cost arising from the CAT NMS Plan. Second, to the extent that the Commission and the Participants amend their surveillance programs in the presence of the Central Repository, the broker-dealers may incur costs to adjust their internal compliance programs. And third, as described more fully in Appendix C, Analysis of the Impact on Competition, Efficiency and Capital Formation, broker-dealer competition may be impacted if the direct and indirect costs associated with meeting the CAT NMS Plan's requirements materially impact the provision of their services to the public. Such a reduction in the provision of these services may impose an indirect cost on the public as well.

The Participants considered the potential for CAT Reporters to shift fees and other costs associated with the CAT NMS Plan. Participants may charge their members to cover the CAT NMS Plan costs either explicitly or subsume those costs in other fees or assessments. Broker-dealers may charge their clients for their own costs, whether incurred directly or indirectly, either through explicit fees associated with CAT or through their existing fee structures. This analysis does not measure either the likelihood of costs being passed from the Participant to the broker-dealers or from the broker-dealers to their clients, or the potential associated dollar impacts. The extent to which these costs may be passed on to clients is related to alternative sources of revenue available to the CAT Reporters, the materiality of those costs, and the ease with which clients can substitute away from any given Participant or broker-dealer. Participants note, however, that Participants and broker-dealers may currently have incentives and opportunity to shift regulatory compliance costs to their customers and that nothing in the CAT NMS Plan alters those incentives or the likelihood of those costs being passed on.

In addition, indirect costs to broker-dealers may arise as a result of the implementation of the CAT NMS Plan. First, broker-dealers may incur additional costs related to training and professional development, to equip the staff with the necessary knowledge necessary for compliance with the SEC Rule 613. Broker-dealers were specifically asked to consider these costs as part of their study response. Second, the enhanced and standardized data to be captured by the Central Repository is anticipated to increase the effectiveness of surveillance by regulators, which may impact broker-dealer compliance programs.

(iv) Estimate of Aggregate Direct Costs and the Allocation of Costs across CAT Reporters

(A) Estimate of Aggregate Costs

In order to create the regulatory data infrastructure required by SEC Rule 613, this Plan proposes to build and maintain the CAT, along with resources necessary to generate regulatory reports and related analysis. CAT Reporters, including Participants and broker-dealers engaging in trading and quoting activities in Eligible Securities, will be jointly responsible for providing the capital to build and maintain the CAT. Costs eligible to be allocated jointly include any associated liabilities accrued during the planning and building phases of the project that are directly attributable to the CAT NMS Plan, for example, legal and consulting fees, and will be allocated according to the funding model described in Article XI of the CAT NMS Plan.

In order to calculate to the implementation and annual maintenance costs of the CAT, the Participants considered the relevant cost factors for the following entities: Plan Processor, Participants, broker-dealers (large and small) and vendors. All implementation costs reflected below are in dollar costs for the year they are expected to be incurred, while all maintenance costs are estimated for the fifth year after the approval of the CAT NMS Plan, when all CAT Reporters are expected to be live.

(1) Plan Processor

Implementation Costs. For implementation costs associated with the Plan Processor, the Participants reviewed the build costs received from the Shortlisted Bidders and identified the high and low costs to use as a component of the overall industry cost. The lowest cost received was $30,000,000 and the highest estimate received was $91,600,000.

Maintenance Costs. For maintenance costs associated with the Plan Processor, the Participants also reviewed the cost schedules received from the Shortlisted Bidders to build the range. To define the range of maintenance costs, the Participants reviewed the peak year maintenance costs from the Shortlisted Bidders. In addition to the costs received from the Shortlisted Bidders associated with the maintenance of operating and running the CAT, the Participants also included a yearly technical upgrade estimate to conservatively take into account changes in technology that may take place during the maintenance of the CAT. These additional costs begin at approximately 20% in year one, and slowly decrease to 5% during year five of operation. As such, the annual maintenance costs are estimated to range from $35,200,000 to $134,900,000.

Retirement of Systems Costs. The Plan Processor is not expected to incur costs related to the retirement of systems.

(2) Participants

Upon review of the requirements associated with Approach 1 and Approach 2, the Participants identified that they do not favor one approach over the other.

Implementation Costs. To estimate implementation costs for the Participants, the Participants used the aggregated results from the Costs to Participants Study. Based on the responses received from the Participants, the implementation of regulatory reporting is expected to cost $17,900,000 and the implementation of surveillance functions is estimated to cost $23,200,000.

Maintenance Costs. To estimate the maintenance costs for the Participants, the Participants reviewed the results from the Costs to Participants Study for regulatory reporting and surveillance costs. The Participants estimated that annual aggregate regulatory reporting costs would be equal to $14,700,000 and that annual aggregate surveillance maintenance costs would cost $87,700,000.

Retirement of Systems Costs. To estimate the costs related to the retirement of systems for the Participants, the Participants reviewed the results from the Costs to Participants Study for retirement of systems costs. The Participants estimated that costs associated with retirement of systems would be equal to $310,000.

(3) Broker-Dealers

Implementation and maintenance costs related to the CAT for broker-dealers were extrapolated from the results of the Costs to CAT Reporters Study. As described above, the Participants believe there to be approximately 1,800 broker-dealers that would be CAT Reporters. Of the 167 respondents to the Costs to CAT Reporters Study, 49 were large firms, and 118 were small firms, indicating a large to small firm ratio in the overall population of 29% to 71%. Applying this ratio to the total population of 1,800 broker-dealers, results in 522 large firms and 1,278 small firms. In comparing the costs between the two approaches, the Participants have identified that Approach 1 is more expensive than the Approach 2, which causes Approach 1 to form the upper bound of the broker-dealer cost range, and Approach 2 to form the lower bound of the broker-dealer cost range.

Implementation Costs. For Approach 1, large firm respondents estimated that implementation costs would be equal to $5,052,000 per firm, for a total estimated implementation cost of approximately $2.6 billion. Small firm respondents estimated that implementation costs for Approach 1 would be equal to $551,200 per firm, for a total estimated implementation cost of

$740 million.[213] For Approach 2, large firm respondents estimated that implementation costs would be equal to $4,738,000 per firm, for a total estimated implementation cost of approximately $2.5 billion, while small firms estimated implementation costs for Approach 2 to be equal to $461,000 per firm, for a total cost of $619 million.[214] This results in a cost range of $2.5 billion to $2.6 billion for large firms, and a cost range of $619 million to $740 million for small firms for the implementation of the CAT.

Maintenance Costs. For Approach 1, large firm respondents estimated that maintenance costs would be equal to $3,662,000 per firm per year, for a total estimated annual maintenance cost of approximately $2.3 billion.[215] Small firm respondents estimated that maintenance costs for Approach 1 would be equal to $475,600 per firm per year, for a total estimated annual maintenance cost of approximately $739 million.[216] For Approach 2, large firm respondents estimated that maintenance costs would be equal to $3,148,000 per firm per year, for a total estimated annual maintenance cost of approximately $2.0 billion,[217] while small firms estimated maintenance costs for Approach 2 to be equal to $441,500 per firm per year, for a total annual cost of approximately $686 million.[218] This implies an annual cost range of approximately $2.0 billion to $2.3 billion for large firms, and an annual cost range of approximately $686 million to $739 million for small firms for maintenance of reporting to the Central Repository. These maintenance costs are discrete costs for the maintenance of CAT reporting, and are not intended to show incremental costs against current regulatory reporting requirements. Based on the Costs to CAT Reporters Study, Participants estimate these incremental costs to be negligible.

Retirement of Systems Costs. To estimate the costs related to the retirement of systems for the broker dealers, the Participants reviewed the results from the Costs to CAT Reporters Study for retirement of systems costs. Large firm respondents estimated costs to be equal to $2,830,000, for a total retirement of systems cost equal to approximately $1.47 billion. Small firms estimated that costs related to the retirement of systems would cost $864,000, for a total retirement of systems cost of approximately $1.10 billion.

(4) Vendors

Implementation Costs. For implementation costs associated with Vendors, the Participants reviewed the aggregate build costs received from the Costs to Vendors Study and identified that Approach 1 would cost $118,200,000 to implement, while it would cost $51,600,000 to implement Approach 2.[219]

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[213] Small firm total estimated implementation costs include a compound annual growth rate of 5% to account for increases in labor and operational costs over time. The rate was applied for one year, from the beginning of CAT reporting in year 1 through the expected incurring of build costs by small firms in the year prior to the start of their reporting (i.e., year 2). Because large firms report a year earlier than small firms and would incur most implementation costs in year 1, a similar rate has not been applied to their implementation costs.

[214] *Id.*

[215] Large and small firm total estimated maintenance costs are estimated in year 5 to account for a steady state of reporting, and include a compound annual growth rate of 5% to account for increases in labor and operational costs over time. The rate was applied for four years, from the beginning of CAT reporting in year 1 through year 5.

[216] *Id.*

[217] *Id.*

[218] *Id.*

[219] Vendor cost estimates assume an annual cost per FTE of $401,440, consistent with the rate applied by the Commission in the Adopting Release.

Maintenance Costs. For maintenance costs associated with Vendors, the Participants also reviewed the cost schedules received from the Costs to Vendors Study. Vendors indicated an aggregate estimated annual cost of $38,600,000 for maintenance of Approach 1, and annual estimated maintenance costs of $48,700,000 for Approach 2.[220]

Retirement of Systems Costs. Vendors indicated an aggregate cost of $21,300,000 for the retirement of existing regulatory reporting systems.

(5) Total Aggregate Costs

Based on the analysis of responses to the studies described above, and cost estimates provided by the Shortlisted Bidders, the Participants estimate the initial aggregate cost to the industry related to building and implementing the CAT would range from $3.2 billion to $3.6 billion. Estimated annual aggregate costs for the maintenance and enhancement of the CAT would range from $2.8 billion and $3.4 billion. Additionally, costs to retire existing systems would be approximately $2.6 billion.

(B) Impacts of Not Receiving Requested Exemptions

On January 30, 2015, the Participants submitted a letter to request that the Commission grant exemptions, pursuant to its authority under Section 36 of the Exchange Act, from the requirement to submit a national market system plan that meets certain reporting requirements specified in SEC Rule 613(c) and (d). Specifically, the Participants requested exemptive relief related to: (1) options market maker quotes; (2) Customer-IDs; (3) CAT-Reporter-IDs; (4) linking executions to specific subaccount allocations on Allocation Reports; and (5) time stamp granularity. On September 2, 2015, the Participants supplemented their request with a supplemental request, clarifying its original requested exemption from the requirement in Rule 613(c)(7)(viii)(B) (including, in some instances, requesting an exemption from the requirement to provide an account number, account type and date account opened under Rule 613(c)(7)(viii)(B)).

First, SEC Rule 613(c)(7) requires both options market makers and the options exchanges to record and report the details of options market maker quotes received by the options exchanges to the Central Repository. The Participants requested that the Commission provide the Participants with an exemption so that only options exchanges would record and report details for each options market maker quote and related Reportable Event to the Central Repository, while options market makers would be relieved of their obligation to record and report their quotes and related Reportable Events to the Central Repository. The Participants estimated that having both parties report options market maker quotes to the CAT would impose significant costs on the Plan Processor due to increased data storage and technical infrastructure, and on the options market makers due to a higher volume of reporting obligations. The Participants estimated that having both parties report options market maker quotes to the CAT would increase the size of data submitted to the CAT by approximately 18 billion records each day. Bidders estimated that requiring dual reporting of options market maker quotes would, over a five year period, lead to additional costs of between $2 million and $16 million for data storage and technical infrastructure for the Plan Processor. In addition, according to the results of a cost study conducted by three industry associations,[221] the cost to options market makers to meet their quote reporting obligations ranges from $307 million to $382 million over a five year period.

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[220] The total estimated vendor maintenance costs include a compound annual growth rate of 5% to account for increases in labor and operational costs over time. The rate was applied for four years, from the beginning of broker-dealer CAT reporting in year one through year five.

Second, Rule 613(c)(7) requires each CAT Reporter to record and report "Customer-ID(s) for each customer" when reporting order receipt or origination information to the Central Repository. The Commission noted that including a unique customer identifier could enhance the efficiency of surveillance and regulatory oversight. The Participants, however, favor the Customer Information Approach, that would require broker-dealers to provide detailed account and Customer information to the CAT, and have the Plan Processor correlate the Customer information across broker-dealers, assign a unique Customer identifier to each Customer and use that unique Customer identifier consistently across all CAT Data. The Participants believe that the Customer-ID approach imposes a significant cost burden on market participants and on the Plan Processor. According to cost estimates provided by the DAG,[222] the cost for the top 250 CAT reporters to implement the Customer-ID as required in SEC Rule 613 would be at least $195 million. The Participants believe that this cost estimate is conservative, since it only represents the cost estimate for 11% of the total broker-dealers that are expected to be CAT Reporters.

Third, SEC Rule 613(c)(7) requires that a CAT-Reporter-ID be reported to the Central Repository for each order and Reportable Event, so that regulators can determine which market participant took action with respect to an order at each Reportable Event. The Participants, however, have proposed to leverage existing business practices and identifiers ("Existing Identifier Approach"), rather than requiring new identifiers be established, as the former is deemed more efficient and cost-effective in implementing the CAT-Reporter-ID. The Participants believe that the CAT-Reporter-ID approach would impose a material cost burden on broker-dealers and Participants, as compared to the Existing Identifier Approach, since it would require major changes to broker-dealer systems. According to cost estimates provided by the DAG, the cost for the 250 largest CAT Reporters to implement the CAT-Reporter-ID as required by SEC Rule 613 would be $78 million.

Fourth, Rule 613(c)(7) requires each CAT Reporter to record and report the "the account number for any subaccounts to which the execution is allocated (in whole or part)" if an order is executed. The Participants acknowledge that this information is useful to regulators to fulfill their obligations to protect investors. However, the Participants estimate that meeting the obligations of the Rule would be unduly burdensome and costly to achieve given the existing allocation practices. As an alternative, the Participants proposed that allocations will be reported by CAT Reporters via a tool described as an Allocation Report. To create linkages from the order execution to the allocation process by means of an order identifier, the broker-dealers would be required to perform extensive re-engineering of their front, middle, and back office systems, and thus incur significant costs. According to cost estimates provided by the DAG, the cost for the 250 largest CAT Reporters to link allocations to executions would be $525 million.

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[221] Cost Survey Report on CAT Reporting of Options Quotes by Market Makers, conducted by the Financial Information Forum, Securities Industry and Financial Markets Association and Securities Traders Association (Nov. 5, 2013); *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p601771.pdf.

[222] Cost estimates provided by the DAG on topics where the Participants have requested exemptive relief can be found at: http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p602494.pdf

Finally, Rule 613(d) requires the recording and reporting of the time of certain Reportable Events to the Central Repository with time stamps at least to the millisecond. The Participants understand that time stamp granularity to the millisecond reflects current industry standards with respect to electronically-processed events in the order lifecycle. However, due to the lack of precision, the industry practice with respect to manual orders is to capture manual time stamps with granularity at the level of one second. The Participants believe that compliance with the time stamp granularity requirements of the Plan for Manual Order Events would result in added costs to the industry as there may be a need to upgrade databases, internal messaging applications/ protocols, data warehouses, and reporting applications to enable the reporting of such time stamps to the Central Repository. The Participants estimate that the total minimum cost to the industry to comply with a singular time stamp requirement for all CAT reporting would be approximately $10.5 million. This estimate is based on a current cost of $1,050 per manual timestamp clock which stamps to the second, with approximately 10,000 clocks requiring replacement across the industry. Upgrading this to millisecond granularity would likely add to the cost to the industry.

(C) Allocation of Costs Across CAT Reporters

Article XI of the CAT NMS Plan provides the process for determining the funding of the Company. In general, the Participants' approach to funding of the Company is: (A) to operate the Company on a break-even basis, which means having fees imposed and collected that cover the Company's costs and an appropriate reserve; and (B) to establish a fee structure that is equitable based on funding principles.[223] Such equitable funding principles include: (1) to create transparent, predictable revenue streams aligned with anticipated costs; (2) to allocate costs among Participants and Industry Members taking into account the timeline for implementation of the CAT and the distinctions in the securities trading operations of Participants and Industry Members and their impact on the Company's resources and operations; (3) to establish a tiered fee structure in which there is general comparability in the level of fees charged to CAT Reporters with the most CAT-related activity as measured by market share for Execution Venues, including ATSs, and by message traffic for non-ATS activities of Industry Members, where, for these comparability purposes, the tiered fee structure takes into consideration affiliations between or among CAT Reporters, whether Execution Venues and/or Industry Members; (4) to provide ease of administrative functions; (5) to avoid disincentives such as burdens on competition and reduction in market quality; and (6) to build financial stability for the Company as a going concern.[224]

Based on these principles, the Operating Committee will establish the Company's funding, which is expected to arise primarily from fees charged to Participants and Industry Members. The Participants have sought input from the DAG as to the specific types of fees. Accordingly, the Participants propose to include the following fee types: (i) fixed fees payable by each Execution Venue that trades NMS Securities and OTC Equity Securities based on its market share (establishing two to five tiers of fixed fees); (ii) fixed fees payable by each Execution Venue that trades Listed Options (as defined in Rule 600(b)(35) of Regulation NMS) based on its market share (establishing two to five tiers of fixed fees); (iii) fixed fees payable by each Industry Member based on message traffic generated by such Industry Member (for the avoidance of doubt, the fixed fees payable by Industry Members pursuant to this paragraph shall, in addition to any other applicable message traffic, include message traffic generated by: (i) an ATS that does not execute orders that is sponsored by such Industry Member; (ii) routing orders to and from any ATS sponsored by such Industry Member); and (iii) ancillary fees (e.g., fees for late or inaccurate reporting, corrections, and access and use of the CAT for regulatory and oversight purposes).[225]

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[223] *See* Section 11.2 of the CAT NMS Plan.
[224] *See id.*

The Operating Committee will use two different criteria to establish fees – market share[226] for Execution Venues, including ATSs, and message traffic for Industry Members' non-ATS activities – due to the fundamental differences between the two types of entities. While there are multiple factors that contribute to the cost of building, maintaining and using the CAT, Bidders stated during workshops and in response to specific questions posed by the Participants that processing and storage of incoming message traffic is one of the most significant cost drivers for the CAT. Thus, the Participants believe that basing fees on message traffic for non-Execution Venue Industry Members is consistent with an equitable allocation of the costs of the CAT. On the other hand, message traffic would not provide the same degree of differentiation between Participants that it does for Industry Members. Because the majority of message traffic at the Participants consists of quotations, and Participants usually disseminate quotations in all instruments they trade, regardless of execution volume, Execution Venues that are Participants generally disseminate similar amounts of message traffic. In contrast, execution volume more accurately delineates the different levels of trading activity of the Participants. For these reasons, the Participants believe that market share is the appropriate metric to use in establishing fees for Participants. Moreover, given the similarity between the activity of exchange Participants and ATSs, both of which meet the definition of an "exchange" as set forth in the Exchange Act, the Participants believe that ATSs should be treated in the same manner as the exchange Participants for the purposes of determining the level of fees associated with the CAT.

Costs are allocated across the different types of CAT Reporters (broker-dealers, Execution Venues) on a tiered basis, in order to equitably allocate costs to those CAT Reporters that contribute more to the costs of creating, implementing and maintaining the CAT. The fees to be assessed at each tier are calculated so as to recoup a proportion of costs appropriate to the message traffic from firms in each tier. Therefore, larger broker-dealers, generating the majority of message traffic, will be in the higher tiers, and therefore be charged a higher fee. Smaller broker-dealers with low levels of message traffic will be in lower tiers and will be assessed a minimal fee for the CAT. The Participants estimate that up to 75% of broker-dealers will be in the lower tiers of the Funding Model.

All fees under Article XI charged directly to Participants and indirectly to Industry Members will be reviewed by the Operating Committee at least annually.[227] All proposed fees to be charged to Industry Members by Participants will be filed with the Commission pursuant to Section 19(b) of the Exchange Act.[228] In addition, all disputes with respect to the fees the Company charges Participants will be resolved by the Operating Committee or a Subcommittee designated by the Operating Committee, subject to the right of Participants to seek redress from the Commission pursuant to SEC Rule 608 or in any other appropriate forum.[229] The Participants will adopt rules requiring that disputes with respect to fees charged to Industry Members will be resolved by the Operating Committee or a Subcommittee, subject to the right of any Industry Member to seek redress from the SEC pursuant to SEC Rule 608 or in any other appropriate forum.[230]

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[225] *See* Section 11.3 (a)-(c) of the CAT NMS Plan.

[226] Market share for Execution Venues is defined as the total trade volume executed on an individual Execution Venue as a percentage of total trades executed across all Venues.

[227] *See* Section 11.3(d) of the CAT NMS Plan.

[228] *See* Section 11.1(b) of the CAT NMS Plan.

[229] *See* Section 4.1 and Section 11.5 of the CAT NMS Plan.

Section 8.5 of the CAT NMS Plan addresses the very limited situations in which the Company may need to make distributions of cash and property of the Company to the Participants. Any distribution to the Participants requires approval by a Supermajority Vote of the Operating Committee.[231] The Participants do not expect any distributions to be made to them except in two possible situations. One situation is if the Participants incur tax liabilities due to their ownership of the Company. An example of tax liabilities being incurred would be if the Company generates profits. Those profits could be taxable to the Participants even if the profits are not distributed to the Participants. In such situation, the Participants could be taxed on amounts they have not received, in which case the Company would make distributions to the Participants, but only to the extent to permit each Participant to pay its incurred tax liability. As discussed, the Participants do not expect the Company to generate profits and rather expect the Company to operate on a break-even basis. The other situation that may require distributions to the Participants would be if the Company dissolves. In that situation, the Company's assets would be distributed first to the Company's creditors such as the Plan Processor or other third parties, second to a reserve for contingent or future liabilities (such as taxes), and third (assuming there are any amounts remaining) to the Participants in proportion to their Capital Accounts. Each Participant is expected to make a nominal contribution of cash or services to its Capital Account at the beginning of the operation of the CAT System. Therefore, any distribution to the Participant of an amount equal to its Capital Account would be limited to the nominal amount contributed. Other than these two limited situations, the Participants do not expect the Company to make any distributions.

The CAT NMS Plan contemplates that the Plan Processor will be responsible for developing and executing administrative processes and procedures to effectuate the smooth functioning of the CAT, consistent with the principles articulated in Article XI. These processes and procedures would include, but are not limited to, establishing budget, notice, billing and collection cycles that provide transparency, predictability and ease of administrative functions to CAT reporters. Criteria and schedules for ancillary fees that might be collected pursuant to Article XI are also anticipated to be published by the Operating Committee.

In articulating the funding principles of the CAT NMS Plan, Participants have established the need for the CAT NMS Plan to, among other things: (1) create transparent, predictable revenue streams for the Company that are aligned with the anticipated costs to build, operate, and administer the CAT and the other costs of the Company; and (2) provide for ease of billing and other administrative functions. The funding principles articulated in Article XI should also inform the policies and procedures adopted by the Operating Committee in executing the associated functions. To that end, to promote fairness and transparency with respect to fees, the Participants expect that the Operating Committee will adopt policies, procedures, and practices around budgeting, assignment of tiers, adjudicating disputes, billing, and collection of fees that provide appropriate transparency to all CAT Reporters. Participants expect that policies or procedures adopted to implement the administration of fee allocation and collection among CAT Reporters would be subject to comment by impacted parties before adoption.

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[230] *See id.*

[231] *See* Section 8.5(a) of the CAT NMS Plan.

(v) Alternatives Considered

(A) Technical Solution

SEC Rule 613(a)(1)(xii) directs Participants to discuss reasonable alternative approaches to creating, implementing and maintaining the CAT. As part of the development of the CAT NMS Plan, the Participants considered a variety of alternatives with respect to technical and user support considerations. The technical considerations include: primary storage, data ingestion format, development process, quality assurance staffing and user support staffing. The analysis presented in Appendix C, D.12, below, describes alternative approaches considered for each technical consideration and the ultimate choice of the CAT NMS Plan based on factors that consider feasibility, cost and efficiency.

In addition, the questions included in the Costs to CAT Reporters Study described above permitted the Participants to evaluate cost considerations to Industry Members associated with two different technical formats for reporting audit trail data to the Central Repository. One approach might permit broker-dealers to submit information data to the Central Repository using their choice among existing industry protocols, such as FIX. The second approach provided a scenario where CAT Reporters would submit relevant data to the Central Repository using a defined or specified format, such as an augmented version of OATS.

(B) Funding Model

As discussed above, Article XI of the CAT NMS Plan sets forth the provisions for establishing the funding of the Company and recovering the costs of operating the CAT. The Participants recognize that there are a number of different approaches to funding the CAT and have considered a variety of different funding and cost allocation models. Each model has its potential advantages and disadvantages. For example, a structure in which all CAT Reporters are charged a fixed fee regardless of reportable activity would provide CAT Reporters greater certainty regarding their fee obligations, but may place undue burden on small CAT Reporters. A variable fee structure focused on specific reportable information may make it easier for Industry Members to pass fees to their customers. However, such fees would be more complex and difficult to administer. Participants were particularly sensitive to the possibility that the fee structure might create distortions to the economic activities of CAT Reporters if not set appropriately.

The Participants considered alternatives to cost allocation ranging from a strict pro-rata distribution, regardless of the type or size of the CAT Reporters, to a distribution based purely on CAT Reporter activity. Participants also considered a variety of ways to measure activity, including notional value of trading (as currently used for purposes of Section 31 fees), number of trades or quotations, and all message traffic sent. Further, Participants considered the comparability of audit trail activity across different Eligible Securities. The Participants discussed the potential approaches to funding, including the principles articulated in Article XI and an illustrative funding model, with the DAG multiple times, beginning on September 3, 2014.

After extensive analysis and taking into consideration feedback from the DAG, the Participants determined that a tiered fixed fee structure would be fair and relatively uncomplicated. The Participants discussed several approaches to developing a tiered model, including defining fee tiers based on such factors as size of firm, message traffic or trading dollar volume. For example, a review of OATS data for a recent month shows the wide range in activity among broker-dealers, with a number of broker-dealers submitting fewer than 1,000 orders for the month and other broker-dealers submitting millions and even billions of orders in the same period. The Participants also considered a tiered model where CAT Reporters would be charged different variable fees based on tier assignment. However, the Participants believe a tiered fixed fee model is preferable to a variable model because a variable model would lack the transparency, predictability, and ease of calculation afforded by fixed fees. Such factors are crucial to estimating a reliable revenue stream for the Company and to permitting CAT Reporters to reasonably predict their obligations. Moreover, the Participants believe that the tiered approach would help ensure that fees are equitably allocated among similarly situated CAT Reporters and would further the goal of the Participants to lessen the impact on smaller firms. Irrespective of the approach taken with fees, the Participants believe that revenues generated should be aligned to the costs of building, implementing and maintaining the CAT, and if revenues collected are in excess of costs for any given year, such excess should be considered in setting fees for the following year.

Finally, the Participants believe that it is important to establish a simple fee structure that is easy to understand and administer. The Participants are committed to establishing and billing fees so that Industry Members will have certainty and the ability to budget for them. In that regard, the CAT NMS Plan expressly provides that the Operating Committee shall not make any changes to any fees on more than a semi-annual basis unless, pursuant to a Supermajority Vote, the Operating Committee concludes that such change is necessary for the adequate funding of the Company.[232]

8. An Analysis of the Impact on Competition, Efficiency, and Capital Formation (SEC Rule 613(a)(1)(viii))

As required by SEC Rule 613(a)(1)(viii), this section provides an analysis of the impact on competition, efficiency and capital formation of creating, implementing, and maintaining the CAT NMS Plan. In recognition of the complexity of this analysis, the Participants have evaluated a variety of sources of information to assist in the analysis of the impact of the CAT NMS Plan on competition, efficiency and capital formation. Specifically, the Participants have evaluated the many comments related to competition, efficiency and capital formation received in response to the Commission's proposal of SEC Rule 613 and during the CAT NMS Plan development process. In addition, the Participants considered the input of the DAG. Finally, the Participants used information derived from three cost studies described in the prior section on costs. Based on a review and analysis of these materials, the Participants believe that the CAT NMS Plan, as submitted, is justified given its estimated impacts on competition, efficiency and capital formation.

(a) Impact on Competition

Through an analysis of the data and information described above, the Participants have evaluated the potential impact of the CAT NMS Plan on competition, including the competitive impact on the market generally and the competitive impact on each type of Person playing a role in the market (e.g., Participants, broker-dealers, vendors, investors). Potential negative impacts on competition could arise if the CAT NMS Plan were to burden a group or class of CAT Reporters in a way that would harm the public's ability to access their services, either through increasing costs or decreased provision of those services. These impacts may be direct, as in the provision of brokerage services to individual investors, or indirect, as in the aggregate costs of managing, trading and maintaining a securities holding. These impacts should be measured relative to the economic baseline, described above.

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[232] *See* Section 11.3(d) of the CAT NMS Plan.

The Participants have identified a series of potential impacts on competition that may arise as a result of the terms and conditions of the CAT NMS Plan. These potential impacts may be related to: (1) the technology ultimately used by the CAT and differences across CAT Reporters in their efforts necessary to meet the CAT NMS Plan's requirements; (2) the method of cost allocation across CAT Reporters; and (3) changes in regulatory reporting requirements, and their attendant costs, particularly to smaller entities, who may previously have benefited from regulatory exemptions.

In general, the Participants believe that the CAT NMS Plan will avoid disincentives such as placing an inappropriate burden on competition in the U.S. securities markets. The discussion below focuses on competition in the Participant and broker-dealer communities, where the Participants believe there is the greatest potential for impact on competition.

(i) Participants

The Participants already incur significant costs to maintain and surveil an audit trail of activity for which they are responsible. Each Participant bears these costs whether it expends internal resources to monitor relevant activity itself, or whether it contracts with others to perform these services on its behalf. The CAT NMS Plan, through the funding principles it sets forth in Section 11.2, seeks to distribute the regulatory costs associated with the development and maintenance of a meaningful and comprehensive audit trail in a principled manner. By calibrating the CAT NMS Plan's funding according to these principles, the Participants sought to avoid placing undue burden on exchanges relative to their core characteristics, including market share and volume of message traffic. Thus, the Participants do not believe that any particular exchange in either the equities or options markets would be placed at a competitive disadvantage in a way that would materially impact the respective Execution Venue marketplaces for either type of security.

In addition, because the CAT NMS Plan seeks to allocate costs in a manner consistent with the Participants' activities, the Participants do not believe that it would discourage potential new entrants. For instance, an equity ATS – which would already incur costs under the CAT NMS Plan as a reporting broker-dealer – should not be discouraged from becoming a national securities exchanges because of the costs it would incur as a Participant based on its business model or pricing structure. As proposed here, the entity would be assessed exactly the same amount for a given level of activity whether it acted as an ATS or as an exchange. Accordingly, the Participants do not believe that adoption of the CAT NMS Plan would favor existing exchanges or types of exchanges vis-à-vis potential new competitors in a way that would degrade available Execution Venue services or pricing. For similar reasons, the Participants also do not believe that the costs of the CAT NMS Plan would distort the marketplace for existing or potential registered securities associations.

(ii) Broker-Dealers

Broker-dealer competition may be impacted if the direct and indirect costs associated with meeting the CAT NMS Plan's requirements materially impact the provision of their services to the public. Further, competition may be harmed if a particular class or group of broker-dealers bears the costs disproportionately, and as a result, investors have more limited choices or increased costs for certain types of broker-dealer services.

For larger broker-dealers, the Participants rely on the information obtained from the Costs to CAT Reporters Study and discussions with the industry to preliminarily conclude that the CAT NMS Plan will not likely have an adverse impact on competition. Under the CAT NMS Plan, broker-dealers would be assessed charges, as determined by the Operating Committee, for the build and maintenance of the CAT. They would also incur costs to build and maintain systems and processes necessary to submit and retain their own information to the Central Repository. The Participants' efforts to align costs with market activity leads to an outcome where dollar costs are borne significantly more by larger entities.

Additionally, large broker-dealers may view themselves as direct competitors to large Participants, in that they may provide similar execution services. The CAT NMS Plan seeks to mitigate competitive impacts by aligning the cost allocation in a manner that seeks comparability among the largest CAT Reporters regardless of their regulatory status.[233]

According to the Costs to CAT Reporters Study, for large broker-dealers, the average decrease in maintenance costs associated with the CAT (i.e., the cost that CAT would impose on firms beyond the current economic baseline) would be $651,924, and the average decrease in maintenance costs for small firms would be $726,216 using Approach 1. For Approach 2, large broker-dealers would see a decrease in maintenance costs associated with the CAT of $1,170,548, and small firms would see a decrease in the same costs of $763,371. These averages could suggest that the decreased costs imposed by the CAT would represent a benefit to both large and small broker-dealers' regulatory budgets. The Participants believe that the CAT NMS Plan would not materially disadvantage small broker-dealers versus large broker-dealers.

For small broker-dealers, the Participants considered their contribution to market activity as an important determinant of the amount of the cost of the CAT that they should bear. While this allocation of costs may be significant for some small firms, and may even impact their business models materially, SEC Rule 613 requires these entities to report. The Participants have not identified a way to further minimize the costs to these firms within the context of the funding principles established as part of the CAT NMS Plan.

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[233] There is empirical evidence that firms' order routing decisions respond to changes in trading fees. Such evidence finds that an increase in the level of an exchange's net fee is associated with a decrease in trading volume and market share relative to other exchanges. This evidence suggests that there is sufficient competition among Execution Venues such that where the Participant's costs for the CAT are material it may be difficult for Execution Venues to fully pass those costs to broker-dealers. This argument holds as long as broker-dealers are not able to pass such costs on to their customers. *See* Cardella et al., *Make and Take Fees in the U.S. Equity Market* (working paper, Apr. 29, 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2149302.

The Participants were particularly sensitive during the development of the CAT NMS Plan to the potential burdens it could place on small broker-dealers. These broker-dealers may incur minimal costs under existing audit trail requirements because they are OATS-exempt or excluded broker-dealers or limited purpose broker-dealers. The Participants note that the CAT NMS Plan contemplates steps to diffuse the potential cost differential between large and small firms. For instance, small broker-dealers generally will have an additional year before they are required to start reporting data under the CAT NMS Plan to the Central Repository. This will permit these firms greater time to implement the changes to their own systems necessary to comply with the Plan. Furthermore, the Participants have sought exemptive relief concerning time stamps for recording the time of Manual Order Events.

The Participants are cognizant that the method by which costs are allocated to broker-dealers may have implications for their business models that might ultimately impact competition. For instance, if the method of cost allocation created disincentives to quoting activity, certain broker-dealer's business models might be affected more greatly than others. The Participants are unable to determine whether and how changing these incentives may impact competition. Participants intend to monitor changes to overall market activity and market quality and consider appropriate changes to the cost allocation model where merited.

The Participants note that if the exemption requests that have been submitted to the Commission are not granted, the requirements of SEC Rule 613 may impose significantly greater costs that could potentially cause small broker-dealers to exit the marketplace, discourage new entrants to the small broker-dealer marketplace, or impact the broker-dealer landscape in other ways that may dampen competitive pressures.

(b) Impact on Efficiency

Through an analysis of the data and information described above, the Participants have evaluated the impact of the CAT NMS Plan on efficiency, including the impact on the time, resources and effort needed to perform various regulatory and other functions. In general, the Participants believe that the CAT NMS Plan should have a net positive effect on efficiency.

Overall, the Participants believe that the CAT NMS Plan could improve market efficiency by reducing monitoring costs and increasing efficiency in the enforcement of Participant and Commission rules. Additionally, the Participants believe that the CAT will enable the Participants and the Commission to detect more quickly wrongdoing on a cross-market basis, which may deter some market participants from taking such actions. For example, FINRA's equity cross-market surveillance patterns have already demonstrated the value of integrating data from multiple markets. FINRA has found that approximately 44 percent of the manipulation-based alerts it generated involved conduct on two or more equity markets and 43 percent of the alerts involved conduct by two or more market participants.[234] A reduction in prohibited activity, as well as faster identification of such activity by regulators, would lead to a reduction in losses to investors and increased efficiency.

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[234] Remarks of Robert Ketchum, Chairman and Chief Executive Officer, FINRA (Sept. 17. 2014), *available at* http://www.finra.org/Newsroom/Speeches/Ketchum/P600785.

The CAT could also create more focused efficiencies for broker-dealers and Participants by reducing the redundant and overlapping systems and requirements identified above. For all CAT Reporters, the standardization of various technology systems will provide, over time, improved process efficiencies, including efficiencies gained through the replacement of outdated processes and technology with cost saving and related staffing reductions. Standardization of systems will improve efficiency, for both Participants and broker-dealers, in the form of resource consolidation, sun-setting of systems, consolidated legacy systems and processes and consolidated data processing. In addition, more sophisticated monitoring may reduce the number of ad hoc information requests, thereby reducing the overall burden and increasing the operational efficiency of CAT Reporters.

CAT Reporters may also experience various long term efficiencies from the increase in surveillance capabilities, such as greater efficiencies related to administrative functions provided by enhanced regulatory access, superior system speed and reduced system downtime. Moreover, the Commission and the Participants expect to have more fulsome access to unprocessed regulatory data and timely and accurate information on market activity, thus providing the opportunity for improved market surveillance and monitoring.

Note, however, that uniform reporting of data to the Central Repository may require the development of data mapping and data dictionaries that will impose burdens in the short term. CAT Reporters also may incur additional time and direct costs to comply with new encryption mechanisms in connection with the transmission of PII data (although the quality of the process will improve).

The Participants are cognizant that the method by which costs are allocated to broker-dealers may have implications for their business models that might ultimately impact efficiency. For instance, if the method of cost allocation created disincentives to the provision of liquidity, there may be an impact on the quality of the markets and an increase in the costs to investors to transact. As a result, the Participants set forth the funding principles that will guide the selection of the cost allocation model. The Participants have also sought out evidence available to best understand how cost allocation models may impact market participation, and more importantly, ultimately market outcomes.[235]

The Participants intend to monitor changes to overall market activity and market quality and will consider appropriate changes to the cost allocation model where merited.

(c) Impact on Capital Formation

Through an analysis of the data and information described above, the Participants also have assessed the impact of the CAT NMS Plan on capital formation, including the impact on both investments and the formation of additional capital. In general, the Participants believe that the CAT NMS Plan will have no deleterious effect on capital formation.

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[235] *See, e.g.*, IIROC's analysis of its market regulation fee model, *available at* http://www.iiroc.ca/Documents/2011/5f95e549-10d1-473e-93cf-3250e026a476_en.pdf[iiroc.ca] and http://www.iiroc.ca/Documents/2012/bf393b26-7bdf-49ff-a1fc-3904d1de3983_en.pdf[iiroc.ca].

In general the Participants believe that the enhanced surveillance of the markets may instill greater investor confidence in the markets, which, in turn, may prompt greater participation in the markets. It is possible that greater investor participation in the markets could bolster capital formation by supporting the environment in which companies raise capital.

Moreover, the Participants believe that the CAT NMS Plan would not discourage capital formation. As discussed in greater detail above, the Participants have analyzed the degree to which the CAT NMS Plan should cover Primary Market Transactions. Based on this analysis, the Participants believe that the CAT NMS Plan has been appropriately tailored so it does not create an undue burden on the primary issuances that companies may use to raise capital.

In addition, the Participants do not believe that the costs of the CAT NMS Plan would come to bear on investors in a way that would materially limit their access to or participation in the capital markets.

Finally, the Participants believe that, given the CAT NMS Plan's provisions to secure the data collected and stored by the Central Repository, the CAT NMS Plan should not discourage participation by market participants who are worried about data security and data breaches. As described more fully in the CAT NMS Plan and Appendix C, The Security and Confidentiality of the Information Reported to the Central Repository, and Appendix D, Data Security, the Plan Processor will be responsible for ensuring the security and confidentiality of data during transmission and processing, as well as at rest, and for ensuring that the data is used only for permitted purposes. The Plan Processor will be required to provide physical security for facilities where data is transmitted or stored, and must provide for the security of electronic access to data by outside parties, including Participants and the Commission, CAT Reporters, or Data Submitters. The Plan Processor must include in these measures heightened security for populating, storing, and retrieving particularly sensitive data such as PII. Moreover, the Plan Processor must develop and maintain this security program with a dedicated staff including, among others, a Chief Information Security Officer dedicated to monitoring and addressing data security issues for the Plan Processor and Central Repository, subject to regular review by the Chief Compliance Officer. The Plan Processor also will be required to provide regular reports to the Operating Committee on a number of items, including any data security issues for the Plan Processor and Central Repository.

(d) Impacts of the CAT NMS Plan Governance on Efficiency, Competition, and Capital Formation

Participants considered the impacts of the CAT NMS Plan governance on efficiency, competition, and capital formation. Participants recognize that without effective governance, it will become harder for the CAT NMS Plan to achieve its intended outcome, namely, enhanced investor protection, in an efficient manner. Participants specifically considered two areas where ineffective governance might lead to economic distortions or inefficiencies: (i) the voting protocols defined in the CAT NMS Plan both for Participants in developing the CAT, and for the Operating Committee after the adoption of the CAT NMS Plan; and (ii) the role of industry advisors within the context of CAT NMS Plan governance.

Participants understand that there may be detrimental impacts to adopting voting protocols that might impede the effective administration of the CAT System. For instance, too high a threshold for decision making may limit the ability of the body to adopt broadly agreed upon provisions. The extreme form of this would have been for the CAT NMS Plan to require unanimity on all matters. In such case, one dissenting opinion could effectively derail the entire decision-making apparatus. The inability to act in a timely way may create consequences for efficiency, competition, and capital. Conversely, if Participants set a voting threshold that is too low, it might have the impact of not giving sufficient opportunity to be heard or value to dissenting opinions and alternative approaches. As an example, if Participants were to set voting thresholds too low, it might be possible for a set of Participants to adopt provisions that might provide them a competitive advantage over other Participants. Either forms (a too high or too low threshold) could result in negative impacts to efficiency, competition, and capital formation. These issues apply in the context of efforts of the Participants to develop the CAT NMS Plan submitted here or in the context of the Operating Committee's responsibilities after approval of the CAT NMS Plan.

To address these concerns, Participants carefully considered which matters should require a Supermajority Vote and which matters should require a Majority Vote.[236] The decision required Participants to balance the protection of rights of all parties with the interest of avoiding unnecessary deadlock in the decision making process. As a result, Participants have determined that use of a Supermajority Vote should be for instances considered by the Participants to have a direct and significant impact on the functioning, management, and financing of the CAT System. This formulation, relying on Majority Vote for routine decisions and Supermajority Vote for significant matters, is intended to meet the Commission's direction for "efficient and fair operation of the NMS plan governing the consolidated audit trail."[237]

Participants also considered the role of industry representation as part of the governance structure. Participants recognize the importance of including industry representation in order to assure that all affected parties have a representative in discussing the building, implementation, and maintenance of the CAT System. Participants actively sought insight and information from the DAG and other industry representatives in developing the CAT NMS Plan. The CAT NMS Plan also contemplates continued industry representation through an Advisory Committee, intended to support the Operating Committee and to promote continuing efficiency in meeting the objective of the CAT.

C. IMPLEMENTATION AND MILESTONES OF THE CAT

9. A Plan to Eliminate Existing Rules and Systems (SEC Rule 613(a)(1)(ix))

As required by SEC Rule 613(a)(1)(ix), this section sets forth a plan to eliminate rules and systems (or components thereof) that will be rendered duplicative by the consolidated audit trail, including identification of such rules and systems (or components thereof); to the extent that any existing rules or systems related to monitoring quotes, orders and executions provide information that is not rendered duplicative by the consolidated audit trail, an analysis of, among other things, whether the collection of such information remains appropriate; if still appropriate whether such information should continue to be separately collected or should instead be incorporated into the CAT; or if no longer appropriate, how the collection of such information could be efficiently terminated.

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[236] Further discussion of the Participants' consideration of the use of the Majority Vote and Supermajority Vote is contained in Appendix C, 11, Process by Which Participants Solicited Views of Members and Other Appropriate Parties Regarding Creation, Implementation, and Maintenance of CAT; Summary of Views; and How Sponsors Took Views Into Account in Preparing NMS Plan (SEC Rule 613(a)(1)(xi)).

[237] Adopting Release at 45787.

Milestone	**Projected Completion Date**
Identification of Duplicative Rules and Systems	
Each Participant will initiate an analysis of its rules and systems to determine which require information that is duplicative of the information available to the Participants through the Central Repository. Examples of Participants' rules to be reviewed include: • The Participants' rules that implement the exchange-wide Consolidated Options Audit Trail System (e.g., CBOE Rule 6.24, etc.) • FINRA rules that implement the Order Audit Trail System (OATS) including the relevant rules of the NASDAQ Stock Market, NASDAQ OMX BX, NASDAQ OMX PHLX, New York Stock Exchange, NYSE MKT, and NYSE ARCA • Option exchange rules that require the reporting of transactions in the equity underlier for options products listed on the options exchange (e.g., PHLX Rule 1022, portions of CBOE Rule 8.9, etc.)	Each Participant has begun reviewing its existing rulebooks and is waiting for the publication of the final reporting requirements to the Central Repository. Each Participant should complete its analysis within twelve (12) months after Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository or, if such Participant determines sufficient data is not available to complete such analysis by such date, a subsequent date needs to be determined by such Participant based on the availability of such data.
Identification of Partially Duplicative Rules and Systems	
Each Participant will initiate an analysis of its rules and systems to determine which rules and/ or systems require information that is partially duplicative of the information available to the Participants through the Central Repository. The	Each Participant has begun reviewing its existing rulebooks and is waiting for publication of the final reporting requirements to the Central Repository. Upon publication of the Technical Specifications, each Participant should

analysis should include a determination as to (1) whether the duplicative information available in the Central Repository should continue to be collected by the Participant; (2) whether the duplicative information made available in the Central Repository can be used by the Participant without degrading the effectiveness of the Participant's rules or systems; and (3) whether the non-duplicative information should continue to be collected by the Participant or, alternatively, should be added to information collected by the Central Repository. Examples of Participants' rules to be reviewed include: • Options exchange rules that require the reporting of large options positions (e.g., CBOE Rule 4.13, etc.) • NYSE Rule 410B which requires the reporting of transactions effected in NYSE listed securities by NYSE members which are not reported to the consolidated reporting systems • Portions of CBOE Rule 8.9 concerning position reporting details	complete its analysis within eighteen (18) months after Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository or, if such Participant determines sufficient data is not available to complete such analysis by such date, a subsequent date needs to be determined by such Participant based on the availability of such data.
Identification of Non-Duplicative Rules or System related to Monitoring Quotes, Orders and Executions	
Each Participant will initiate an analysis of its rules and systems to determine which of the Participant's rules and systems related to monitoring quotes, orders, and executions provide information that is not rendered duplicative by the consolidated audit trail. Each Participant must analyze (1) whether collection of such information should continue to be separately collected or should instead be incorporated into the consolidated audit trail; (2) if still appropriate, whether	Each Participant should complete its analysis within eighteen (18) months after Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository or, if such Participant determines sufficient data is not available to complete such analysis by such date, a subsequent date needs to be determined by such Participant based on the availability of

such information should continue to be separately collected or should instead be incorporated into the consolidated audit trail.; and (3) if no longer appropriate, how the collection of such information could be efficiently terminated, the steps the Participants propose to take to seek Commission approval for the elimination of such rules and systems (or components thereof), and a timetable for such elimination, including a description of the phasing-in of the consolidated audit trail and phasing-out of such existing rules and systems (or components thereof).	such data.
Identification of Participant Rule and System Changes Due to Elimination or Modification of SEC Rules	
To the extent the SEC eliminates SEC rules that require information that is duplicative of information available through the Central Repository, each Participant will analyze its rules and systems to determine whether any modifications are necessary (e.g., delete references to outdated SEC rules, etc.) to support data requests made pursuant to such SEC rules. Examples of rules the SEC might eliminate or modify as a result of the implementation of CAT include: • SEC Rule 17a-25 which requires brokers and dealers to submit electronically to the SEC information on Customers and firms securities trading • SEC Rule 17h-1 concerning the identification of large traders and the required reporting obligations of large traders	Each Participant should complete its analysis within three (3) months after the SEC approves the deletion or modification of an SEC rule related to the information available through the Central Repository. The Participants will coordinate with the SEC regarding modification of the CAT NMS Plan to include information sufficient to eliminate or modify those Exchange Act rules or systems that the SEC deems appropriate. With respect to SEC Rule 17a-25, such coordination will include, among other things, consideration of EBS data elements and asset classes that would need to be included in the Plan, as well as the timing of when all Industry Members will be subject to the Plan.[238] Based on preliminary industry analyses, broker-dealer large trader reporting requirements under SEC Rule 17h-1 could

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[238] *See* SEC Rule 613 – Consolidated Audit Trail (CAT) Preliminary EBS-CAT Gap Analysis, *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p450537.pdf.

	be eliminated via the CAT. The same appears true with respect to broker-dealer recordkeeping. Large trader reporting responsibilities on Form 13H and self-identification would not appear to be covered by the CAT.[239]
Participant Rule Changes to Modify or Eliminate Participant Rules	
Each Participant will prepare appropriate rule change filings to implement the rule modifications or deletions that can be made based on the Participant's analysis of duplicative or partially duplicative rules. The rule change filing should describe the process for phasing out the requirements under the relevant rule.	Each Participant will file to the SEC the relevant rule change filing to eliminate or modify its rules within six (6) months of the Participant's determination that such modification or deletion is appropriate.
Elimination (including any Phase-Out) of Relevant Existing Rules and Systems	
After each Participant completes the above analysis of its rules and systems, each Participant will analyze the most appropriate and expeditious timeline and manner for eliminating such rules and systems.	Upon the SEC's approval of relevant rule changes, each Participant will implement such timeline. One consideration in the development of these timelines will be when the quality of CAT Data will be sufficient to meet the surveillance needs of the Participant (i.e., to sufficiently replace current reporting data) before existing rules and systems can be eliminated.

Order Audit Trail System ("OATS")

The OATS Rules impose obligations on FINRA members to record in electronic form and report to FINRA, on a daily basis, certain information with respect to orders originated, received, transmitted, modified, canceled, or executed by members relating to OTC equity securities[240] and

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[239] *See* FIF CAT WG: Preliminary Large Trader Rule (Rule 13h-1) – CAT (Rule 613) Gap Analysis (Feb. 11, 2014), *available at* https://fif.com/fif-working-groups/consolidated-audit-trail/member-resources/current-documents?download=1221:february-11-2014-fif-cat-wg-preliminary-large-trader-rule-rule-13h-1-cat-rule-613-gap-analysis&start=35.

[240] *See* FINRA Rule 7410(l).

NMS Securities.[241] OATS captures this order information and integrates it with quote and transaction information to create a time-sequenced record of orders, quotes, and transactions. This information is then used by FINRA staff to conduct surveillance and investigations of member firms for potential violations of FINRA rules and federal securities laws. In general, the OATS Rules apply to any FINRA member that is a "Reporting Member," which is defined in Rule 7410 as "a member that receives or originates an order and has an obligation to record and report information under Rules 7440 and 7450."

Although FINRA is committed to retiring OATS in as efficient and timely a manner as practicable, its ability to retire OATS is dependent on a number of events. Most importantly, before OATS can be retired, the Central Repository must contain CAT Data sufficient to ensure that FINRA can effectively conduct surveillance and investigations of its members for potential violations of FINRA rules and federal laws and regulations, which includes ensuring that the CAT Data is complete and accurate. Consequently, one of the first steps taken by the Participants to address the elimination of OATS was an analysis of gaps between the informational requirements of SEC Rule 613 and current OATS recording and reporting rules. In particular, SEC Rule 613(c)(5) and (6) require reporting of data only for each NMS Security that is (a) registered or listed for trading on a national securities exchange; (b) or admitted to unlisted trading privileges on such exchange; or (c) for which reports are required to be submitted to the national securities association. SEC Rule 613(i) requires the Participants to provide to the Commission within six months after the Effective Date a document outlining how the Participants could incorporate into the consolidated audit trail information with respect to equity securities that are not NMS Securities ("OTC Equity Securities") and debt securities (and Primary Market Transactions in such securities). Even though SEC Rule 613 does not require reporting of OTC Equity Securities, the Participants have agreed to expand the reporting requirements to include OTC Equity Securities to facilitate the elimination of OATS.[242]

Next, the Participants performed a detailed analysis of the current OATS requirements and the specific reporting obligations under SEC Rule 613 and concluded that there are 42 data elements found in both OATS and SEC Rule 613; however, there are 33 data elements currently captured in OATS that are not specified in SEC Rule 613.[243] The Participants believe it is appropriate to incorporate data elements into the Central Repository that are necessary to retire OATS and the OATS Rules. The Participants believe that these additional data elements will increase the likelihood that the Central Repository will include sufficient order information to ensure FINRA can continue to perform its surveillance with CAT Data rather than OATS data and can, thus, more quickly eliminate OATS and the OATS Rules.

The purpose of OATS is to collect data to be used by FINRA staff to conduct surveillance and investigations of member firms for potential violations of FINRA rules and federal securities laws and regulations. SEC Rule 613 requires the Participants to include in the CAT NMS Plan a requirement that all Industry Members report information to the Central Repository within three years after the Effective Date. Consistent with this provision, under the terms of Sections 6.4 and 6.7 of the CAT NMS Plan, some Reporting Members will not be reporting information to the Central Repository until three years after the Effective Date. Because FINRA must continue to perform its surveillance obligations without interruption, OATS cannot be entirely eliminated until all FINRA members who currently report to OATS are reporting CAT Data to the Central Repository. However, FINRA will monitor its ability to integrate CAT Data with OATS data to determine whether it can continue to perform its surveillance obligations. If it is practicable to integrate the data in a way that ensures no interruption in FINRA's surveillance capabilities, FINRA will consider exempting firms from the OATS Rules provided they report data to the Central Repository pursuant to the CAT NMS Plan and any implementing rules.

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[241] Other SROs have rules requiring their members to report information pursuant to the OATS Rules. *See, e.g.*, NYSE Rule 7400 Series; NASDAQ Rule 7400 Series.

[242] This expansion of the CAT reporting requirements to OTC Equity Securities was generally supported by members of the broker-dealer industry and was discussed with the DAG on July 24, 2013.

[243] SEC Rule 613(c)(7) lists the minimum order information that must be reported to the CAT and specifies the information that must be included in the CAT NMS Plan. The Commission noted in the Adopting Release that "the SROs are not prohibited from proposing additional data elements not specified in Rule 613 if the SROs believe such data elements would further, or more efficiently, facilitate the requirements of [SEC Rule 613]." Adopting Release at 45750.

FINRA's ability to eliminate OATS reporting obligations is dependent upon the ability of the Plan Processor and FINRA to work together to integrate CAT Data with the data collected by OATS. FINRA is committed to working diligently with the Plan Processor to ensure this process occurs in a timely manner; however, it is anticipated that Reporting Members will have to report to both OATS and the Central Repository for some period of time until FINRA can verify that the data into the Central Repository is of sufficient quality for surveillance purposes and that all reporting requirements meet the established steady state Error Rates set forth in Section A.3(b). Once this is verified, FINRA's goal is to minimize the dual-reporting requirement.

Finally, the Participants note that, pursuant to Section 19 of the Exchange Act, the amendment or elimination of the OATS Rules can only be done with Commission approval. Approval of any such filings is dependent upon a number of factors, including public notice and comment and required findings by the Commission before it can approve any amendments; therefore, FINRA cannot speculate how long this process may ultimately take.

10. Objective Milestones to Assess Progress (SEC Rule 613(a)(1)(x))

As required by SEC Rule 613(a)(1)(x), this section sets forth a series of detailed objective milestones, with projected completion dates, toward implementation of the consolidated audit trail.

(a) Publication and Implementation of the Methods for Providing Information to the Customer-ID Database

Milestone	Projected Completion Date
Selection of Plan Processor	
Participants jointly select the Initial Plan Processor pursuant to the process set forth in Article V of the CAT NMS Plan	2 months after Effective Date

Industry Members (other than Small Industry Members[244])	
Plan Processor publishes the procedures, connectivity requirements and Technical Specifications for Industry Members to report Customer Account Information to the Central Repository	6 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Industry Members (other than Small Industry Members) begin connectivity and acceptance testing with the Central Repository	3 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Industry Members (other than Small Industry Members) begin reporting customer / institutional / firm account information to the Central Repository for processing	1 month before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Small Industry Members	
Small Industry Members begin connectivity and acceptance testing with the Central Repository	3 months before Small Industry Members are required to begin reporting data to the Central Repository
Small Industry Members begin reporting customer / institutional / firm account information to the Central Repository for processing	1 month before Small Industry Members are required to begin reporting data to the Central Repository

(b) Submission of Order and MM Quote Data to Central Repository

Milestone	Projected Completion Date
Participants	
Plan Processor begins developing Technical Specification(s) for Participant submission of order and MM Quote data	10 months before Participants are required to begin reporting data to the Central Repository
Plan Processor publishes iterative drafts	As needed before publishing of the

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[244] Small broker-dealers are defined SEC Rule 0-10(c).

of Technical Specification(s)	final document
Plan Processor publishes Technical Specification(s) for Participant submission of order and MM Quote data	6 months before Participants are required to begin reporting data to the Central Repository
Plan Processor begins connectivity testing and accepting order and MM Quote data from Participants for testing purposes	3 months before Participants are required to begin reporting data to the Central Repository
Plan Processor plans specific testing dates for Participant testing of order and MM Quote submission	Beginning 3 months before Participants are required to begin reporting data to the Central Repository
Industry Members (other than Small Industry Members)	
Plan Processor begins developing Technical Specification(s) for Industry Members submission of order data	15 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Plan Processor publishes iterative drafts of Technical Specification(s)	As needed before publishing of the final document
Plan Processor publishes Technical Specification(s) for Industry Member submission of order data	1 year before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Participant exchanges that support options MM quoting publish specifications for adding Quote Sent time to Quoting APIs	6 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Plan Processor begins connectivity testing and accepting order data from Industry Members (other than Small Industry Members) for testing purposes	6 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Plan Processor plans specific testing dates for Industry Members (other than Small Industry Members) testing of order submission	Beginning 3 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central

	Repository
Participant exchanges that support options MM quoting begin accepting Quote Sent time on Quotes	1 month before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Small Industry Members	
Plan Processor begins connectivity testing and accepting order data from Small Industry Members for testing purposes	6 months before Small Industry Members are required to begin reporting data to the Central Repository
Plan Processor plans specific testing dates for Small Industry Members testing of order submissions	Beginning 3 months before Small Industry Members are required to begin reporting data to the Central Repository

(c) Linkage of Lifecycle of Order Events

Milestone	Projected Completion Date
Participants	
Using order and MM Quote data submitted during planned testing, Plan Processor creates linkages of the lifecycle of order events based on the received data	3 months before Participants are required to begin reporting data to the Central Repository
Participants must synchronize Business Clocks in accordance with Section 6.8 of the CAT NMS Plan	4 months after effectiveness of the CAT NMS Plan
Industry Members (other than Small Industry Members)	
Using order and MM Quote data submitted during planned testing, Plan Processor creates linkages of the lifecycle of order events based on the received data	6 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Industry Members must synchronize Business Clocks in accordance with	4 months after effectiveness of the CAT NMS Plan

Section 6.8 of the CAT NMS Plan	
Small Industry Members	
Using order and MM Quote data submitted during planned testing, Plan Processor creates linkages of the lifecycle of order events based on the received data	6 months before Small Industry Members are required to begin reporting data to the Central Repository
Industry Members must synchronize Business Clocks in accordance with Section 6.8 of the CAT NMS Plan	4 months after effectiveness of the CAT NMS Plan

(d) Access to the Central Repository for Regulators

Milestone	Projected Completion Date
Plan Processor publishes a draft document detailing methods of access to the Central Repository for regulators	6 months before Participants are required to begin reporting data to the Central Repository
Plan Processor publishes a finalized document detailing methods of access to the Central Repository for regulators, including any relevant APIs, GUI descriptions, etc. that will be supplied for access	1 month before Participants are required to begin reporting data to the Central Repository
Plan Processor provides (1) test information, either from Participant testing or from other test data, for regulators to test use of the Central Repository and (2) regulators connectivity to the Central Repository test environment and production environments	1 month before Participants are required to begin reporting data to the Central Repository
Plan Processor provides regulators access to test data for Industry Members (other than Small Industry Members)	6 months before Industry Members (other than Small Industry Members) are required to begin reporting data to the Central Repository
Plan Processor provides regulators access to test data for Small Industry Members	6 months before Small Industry Members are required to begin reporting data to the Central Repository

(e) Integration of Other Data ("Other Data" includes, but is not limited to, SIP quote and trade data, OCC data, trade and quote information from Participants and reference data)

Milestone	Projected Completion Date
Operating Committee finalizes Other Data requirements	10 months before Participants are required to begin reporting data to the Central Repository
Plan Processor determines methods and requirements for each additional data source and publish applicable Technical Specifications, if required	3 months before Participants are required to begin reporting data to the Central Repository
Plan Processor begins testing with Other Data sources	1 month before Participants are required to begin reporting data to the Central Repository
Plan Processor begins accepting Other Data sources	Concurrently when Participants report to the Central Repository

D. **PROCESS FOLLOWED TO DEVELOP THE NMS PLAN:** These considerations require the CAT NMS Plan to discuss: (i) the views of the Participants' Industry Members and other appropriate parties regarding the creation, implementation, and maintenance of the CAT; and (ii) the alternative approaches to creating, implementing, and maintaining the CAT considered and rejected by the Participants.

11. Process by Which Participants Solicited Views of Members and Other Appropriate Parties Regarding Creation, Implementation, and Maintenance of CAT; Summary of Views; and How Sponsors Took Views Into Account in Preparing NMS Plan (SEC Rule 613(a)(1)(xi))

(a) Process Used to Solicit Views:

When the Participants first began creating a CAT pursuant to SEC Rule 613, the Participants developed the following guiding principles (the "Guiding Principles"):

i. The CAT must meet the specific requirements of SEC Rule 613 and achieve the primary goal of creating a single, comprehensive audit trail to enhance regulators' ability to surveil the U.S. markets in an effective and efficient way.

ii. The reporting requirements and technology infrastructure developed must be adaptable to changing market structures and reflective of trading practices, as well as scalable to increasing market volumes.

iii. The costs of developing, implementing, and operating the CAT should be minimized to the extent possible. To this end, existing reporting structures and technology interfaces will be utilized where practicable.

iv. Industry input is a critical component in the creation of the CAT. The Participants will consider industry feedback before decisions are made with respect to reporting requirements and cost allocation models.

The Participants explicitly recognized in the Guiding Principles that meaningful input by the industry was integral to the successful creation and implementation of the CAT, and as outlined below, the Participants have taken numerous steps throughout this process to ensure the industry and the public have a voice in the process.

(i) General Industry Solicitation

SEC Rule 613 was published in the Federal Register on August 1, 2012, and the following month, the Participants launched the CAT NMS Plan Website, which includes a dedicated email address for firms or the public to submit views on any aspect of the CAT. The CAT NMS Plan Website has been used as a means to communicate information to the industry and the public at large since that time. Also beginning in September 2012, the Participants hosted several events intended to solicit industry input regarding the CAT NMS Plan. A summary of the events is provided below:[245]

- *CAT Industry Call (September 19, 2012).* The Participants provided an overview of SEC Rule 613, the steps the Participants were taking to develop a CAT NMS Plan as required by SEC Rule 613, and how the Participants planned to solicit industry comments and feedback on key implementation issues.

- *CAT Industry Events (October 2012).* The Participants provided an overview of SEC Rule 613 and the steps the Participants were taking to develop an NMS Plan as required by SEC Rule 613. The events included an open Q & A and feedback session so that Industry Members could ask questions of the Participants and share feedback on key implementation issues. Two identical sessions were held on October 15, 2012 from 2:00 p.m. to 4:00 p.m. and on October 16, 2012 from 10:00 a.m. to 12:00 p.m. A total of 89 Industry Members attended the October 15 event in person, and a total of 162 Industry Members attended it by phone. A total of 130 Industry Members attended the October 16 event in person, and a total of 48 Industry Members attended it by phone.

- *CAT Industry Call and WebEx (November 29, 2012).* The Participants provided an update on CAT NMS Plan development efforts including the process and timeline for issuing the RFP to solicit Bids to build and operate the CAT.

- *CAT Industry Events (February 27, 2014 and April 9, 2014).* During these two events, the Participants provided an overview of the latest progress on the RFP process and the overall development of the NMS Plan. A total of 120 Industry Members attended the February event in person, and a total of 123 Industry Members attended it by phone. A total of 46 Industry Members attended the April event in person, and a total of 76 Industry Members attended it by phone.

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[245] These events are also described on the CAT NMS Plan Website at www.catnmsplan.com. *See* SEC Rule 613: Consolidated Audit Trail (CAT), Past Events and Announcements (last updated Dec. 10, 2014), *available at* http://catnmsplan.com/PastEvents/.

- *CAT Cost Study Webinars (June 25, 2014 and July 9, 2014)*. The Participants hosted two Webinars to review and answer questions related to the Reporter Cost Study. There were approximately 100 to 120 Industry Members on each call.

- *CAT Industry Call and WebEx (December 10, 2014)*. The Participants provided an update on CAT NMS Plan development efforts, including filing of the CAT NMS Plan on September 30, 2014, the development of a funding model, and the PPR, which documents additional requirements for the CAT.

For the above events, documentation was developed and presented to attendees, as well as posted publicly on the CAT NMS Plan Website.

In addition to the above events, some Participants individually attended or participated in additional industry events, such as SIFMA conferences and FIF working groups, where they provided updates on the status of CAT NMS Plan development and discussed areas of expected CAT functionality.

The Participants received general industry feedback from broker-dealers and software vendors.[246] The Participants reviewed such feedback in detail, and addressed as appropriate while developing the RFP.

The Participants also received industry feedback in response to solicitations by the Participants for industry viewpoints as follows:

- *Proposed RFP Concepts Document (published December 5, 2012, updated January 16, 2013)*. The Participants published via the CAT NMS Plan Website this document to solicit feedback on the feasibility and cost of implementing the CAT reporting requirements being considered by the Participants. Feedback was received from seven organizations, including software vendors, industry associations and broker-dealers, and the Participants discussed and addressed the feedback as appropriate in the final RFP document.

- *Representative Order Scenarios Solicitation for Feedback (February 1, 2013)*. The Participants solicited feedback via the CAT NMS Plan Website on potential CAT reporting requirements to facilitate the reporting of representative orders. Approximately 30 responses were received.

- *CAT Industry Solicitation for Feedback Concerning Selected Topics Related to NMS Plan (April 22, 2013)*. The Participants solicited feedback via the CAT NMS Plan Website on four components of the CAT NMS Plan: (1) Primary Market Transactions;

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[246] *See generally* Industry Feedback on the Consolidated Audit Trail (last updated Feb. 17, 2015), *available at* http://catnmsplan.com/industryFeedback/.

(2) Advisory Committee; (3) Time Stamp Requirement; and (4) Clock Synchronization. Approximately 80 Industry Members provided responses. FIF, SIFMA, and Thomson Reuters submitted detailed responses to the request for comments.

- *CAT Industry Solicitation for Feedback Concerning Selected Topics Related to NMS Plan (June 2013).* The Participants solicited feedback via the CAT NMS Plan Website concerning Customer identifiers, Customer information, CAT-Reporter-IDs, CAT-Order-IDs, CAT intra-firm order linkages, CAT inter-firm order linkages, broker-dealer CAT order-to-exchange order linkages, data transmission, and error correction.

- *CAT Industry Feedback on Clock Drift and Time Stamp Issues (September 2013).* The Participants solicited feedback via the DAG concerning the implementation impact associated with a 50 millisecond clock drift requirement for electronic orders and executions.

- *Cost Survey on CAT Reporting of Options Market Maker Quotes (November 2013).* The Participants solicited feedback via the DAG concerning the implementation impact and costs associated with reporting of quotes by options market makers to the Central Repository.

- *Cost Estimates for CAT Exemptive Relief (December 2014).* The Participants solicited feedback via the DAG regarding minimum additional costs to be expected by Industry Members in the absence of the requested Exemptive Relief.

- *Cost Estimate for Adding Primary Market Transactions in CAT (February 2015).* The Participants solicited feedback via the DAG concerning the feasibility and costs of broker-dealers to report to the Central Repository information regarding primary market transactions in NMS securities.

- *Clock Offset Survey (February 2015).* The Participants solicited further feedback via the DAG concerning current broker-dealer clock synchronization practices and expected costs associated with complying with a 50ms, 5ms, 1ms, and 100 microsecond clock drift requirement for electronic orders and executions.

Feedback on these topics was received primarily through discussion during meetings of the DAG.

(ii) The Development Advisory Group (DAG)

In furtherance of Guiding Principle (iv) above, the Participants solicited members for the DAG in February 2013 to further facilitate input from the industry regarding various topics that are critical to the success of the CAT NMS Plan. Initially, the DAG consisted of 10 firms that represented large, medium, and small broker-dealers, the Options Clearing Corporation (OCC), a service bureau and three industry associations: the Security Traders Association (STA), SIFMA, and FIF.

In March 2014, the Participants invited additional firms to join the DAG in an effort to ensure that it reflected a diversity of perspectives. At this time, the Participants increased the membership of the DAG to include 12 additional firms. As of January 2015, the DAG consisted of the Participants and Representatives from 24 firms and industry associations.

The DAG has had 49 meetings since April 2013. Topics discussed with the DAG have included:

- *CAT Plan Feedback.* The Participants shared draft versions of the CAT NMS Plan, including the PPR, as it was being developed with the DAG, who provided feedback to the Participants. The Participants reviewed and discussed this feedback with the DAG, and incorporated portions of it into the CAT NMS Plan.

- *Options Market Maker Quotes.* The DAG discussed the impact of options market maker quotes on the industry. A cost analysis was conducted by the industry trade associations to analyze the impact of market maker quote reporting, as well as adding a "quote sent" time stamp to messages sent to exchanges by all options market makers The Participants included in the Exemptive Request Letters a request for exemptive relief related to option market maker quotes given that exchanges will be reporting this data to the CAT.

- *Customer-ID.* The DAG discussed the requirements for capturing Customer-ID. The Participants proposed a Customer Information Approach in which broker-dealers assign a unique Firm Designated ID to each Customer and the Plan Processor creates and stores the Customer-ID. This concept was supported by the DAG and the Participants included in the Exemptive Request Letters a request for exemptive relief related to the Customer-ID to reduce the reporting on CAT Reporters.

- *Time Stamp, Clock Synchronization and Clock Drift.* The DAG discussed time stamps in regards to potential exemptive relief on the time stamp requirements for allocations and Manual Order Events. In addition, industry clock synchronization processes were discussed as well as the feasibility of specific clock drift requirements (e.g., 50ms), with the DAG and the FIF conducting an industry survey to identify the costs and challenges associated with various levels of clock synchronization requirements.[247] The Participants included in the Exemptive Request Letters a request for exemptive relief related to manual time stamps.

- *Exemptive Request Letters.* In addition to the specific areas detailed above (Options Market Maker Quotes, Customer-ID, and Time Stamp, Clock Synchronization, and Clock Drift), the DAG provided input and feedback on draft versions of the Exemptive Request Letters prior to their filing with the SEC, including cost estimates to firms and the Industry as a whole should the exemptive requests not be granted. This feedback was discussed by the Participants and the DAG and incorporated into the Exemptive Request Letters. The DAG also provided input and feedback on the Exemptive

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[247] *See* FIF, Clock Offset Survey Preliminary Report (last updated Feb. 17, 2015), *available at* http://catnmsplan.com/web/groups/catnms/@catnms/documents/appsupportdocs/p602479.pdf (the "FIF Clock Offset Survey Preliminary Report").

Request Letters covering Linking Allocations to Executions and Account Effective Date submitted on April 3, 2015 and September 2, 2015 respectively.

- *Primary Markets.* At the request of the Participants, the DAG discussed with the Participants the feasibility, costs, and benefits associated with reporting allocations of NMS Securities in Primary Market Transactions. The DAG further provided estimated costs associated with reporting allocations of NMS Securities in Primary Market Transactions at the top-account and sub-account levels, which was incorporated into the CAT NMS Plan.[248]

- *Order Handling Scenarios.* The DAG discussed potential CAT reporting requirements for certain order handling scenarios and additional corresponding sub-scenarios (e.g., riskless principal order and sub-scenarios involving post-execution print-for-print matching, pre-execution one-to-one matching, pre-execution many-to-one matching, complex options and auctions) An Industry Member and Participant working group was established to discuss order handling scenarios in more detail.

- *Error Handling and Correction Process.* The DAG discussed error handling and correction process. Industry Members of the DAG provided recommendations for making the CAT error correction processes more efficient. The Participants have reviewed and analyzed these recommended solutions for error correction processes and incorporated them in the requirements for the Plan Processor.

- *Elimination of Systems.* The DAG discussed the gaps between CAT and both OATS and EBS. An OATS-EBS-CAT gap analysis was developed and published on the CAT NMS Plan Website to identify commonalities and redundancies between the systems and the functionality of the CAT. Additionally, gaps between LTID and the CAT were also developed. Additional examples of systems and rules being analyzed include, but are not limited to: CBOE Rule 8.9, PHLX Rule 1022, COATS, Equity Cleared Reports, LOPR, and FINRA Rule 4560.

- *Cost and Funding of the CAT.* The DAG helped to develop the cost study that was distributed to Industry Members. Additionally, the Participants have discussed with the DAG the funding principles for the CAT and potential funding models.

In addition, a subgroup of the DAG has met six times to discuss equity and option order handling scenarios, order types, how and whether the orders are currently reported and how linkages could be created for the orders within the CAT.

(b) Summary of Views Expressed by Members and Other Parties and How Participants Took Those Views Into Account in Preparing the CAT NMS Plan

The various perspectives of Industry Members and other appropriate parties informed the Participants' consideration of operational and technical issues during the development of the CAT

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[248] *See* DAG, Cost Estimate for Adding Primary Market Transactions into CAT (Feb. 17, 2015), *available at* http://catnmsplan.com/industryFeedback/P602480.

NMS Plan. In addition to the regular DAG meetings and special industry calls and events noted above, the Participants conducted multiple group working sessions to discuss the industry's unique perspectives on CAT-related operational and technical issues. These sessions included discussions of options and equity order scenarios and the RFP specifications and requirements.

Industry feedback was provided to Participants through gap analyses, cost studies, comment letters and active discussion in DAG meetings and industry outreach events. Specific topics on which the industry provided input include:

Overall Timeline. Industry Members expressed a concern that the original timeline for implementation of the CAT is significantly shorter than the timeline for other large scale requirements such as Large Trader Reporting. The industry requested that, in developing the overall timeline for development and implementation of the CAT NMS Plan, the Participants account for additional industry comment/input on specifications in the official timeline and discussed risk mitigation strategies for implementation of the Central Repository.

Request for proposal. The Participants provided relevant excerpts of the RFP to DAG members for review and input. These sections were discussed by the Participants, and appropriate feedback was incorporated prior to publishing the RFP.

Options Market Maker Quotes. Industry Members expressed the view that requiring market makers to provide quote information to the CAT will be duplicative of information already being submitted to the CAT by the exchanges. Participants worked closely with DAG members to develop an alternative approach that will meet the goals of SEC Rule 613, and which is detailed in the Exemptive Request Letter that the Participants submitted to the Commission related to manual time stamps.

Customer-ID. Extensive DAG discussions reviewed the Customer-ID requirements in SEC Rule 613. The industry expressed significant concern that the complexities of adding a unique CAT customer identifier to order reporting would introduce significant costs and effort related to the system modifications and business process changes broker-dealers would face in order to implement this requirement of SEC Rule 613. Working with Industry Members, the Participants proposed a Customer Information Approach in which broker-dealers would assign a unique Firm Designated ID to each Customer which the Plan Processor would retain. Additional feedback was provided by the DAG for the use of the Legal Entity Identifier ("LEI") as a valid unique customer identifier as an alternative to Tax Identification Numbers to identify non-natural person accounts. This Customer Information Approach is included in the Exemptive Request Letters that the Participants submitted to the Commission.

Error Correction. DAG members discussed the criticality of CAT Data quality to market surveillance and reconstruction, as well as the need for a robust process for the timely identification and correction of errors. Industry Members provided feedback on error correction objectives and processes, including the importance of those data errors not causing linkage breaks. This feedback was incorporated into the RFP and relevant portions of the PPR.

Industry Members also suggested that CAT Reporters be provided access to their submitted data. Participants discussed the data security and cost considerations of this request and determined that it was not a cost-effective requirement for the CAT.

Governance of the CAT. Industry Members provided detailed recommendation for the integration of Industry Members into the governance of the CAT, including an expansion of the proposed Advisory Committee to include industry associations such as FIF and SIFMA. Industry Members also recommended a three-year term with one-third turnover per year is recommended to provide improved continuity given the complexity of CAT processing.

The Participants have discussed CAT governance considerations with the DAG at several meetings. The Participants incorporated industry feedback into the CAT NMS Plan to the extent possible in light of the regulatory responsibilities placed solely upon the Participants under the provisions of SEC Rule 613. The proposed structure and composition of the Advisory Committee in Article 4.12 was discussed with the DAG in advance of the submission of this Plan.

Role of Operating Committee. The Operating Committee, consisting of one voting member representing each Participant, is structured to ensure fair and equal representation of the Participants in furtherance of SEC Rule 613(b)(1). The overarching role of the Operating Committee is to manage the Company and the CAT System similar to the manner in which a board of directors manages the business and affairs of a corporation. The primary and more specific role of the Operating Committee is to make all policy decisions on behalf of the Company in furtherance of the functions and objectives of the Company under the Exchange Act, any rules thereunder, including SEC Rule 613, and the CAT NMS Plan. In connection with its role, the Operating Committee has the right, power and authority to exercise all of the powers of the Company, to make all decisions, and to authorize or otherwise approve all actions by the Company, except as otherwise provided by applicable law or as otherwise provided in the CAT NMS Plan (Section 4.1 of the CAT NMS Plan). The Operating Committee also monitors, supervises and oversees the actions of the Plan Processor, the Chief Compliance Officer and the Chief Information Security Officer, all of whom are involved with the CAT System on a more detailed and day-to-day basis.

The decisions made by the Operating Committee include matters that are typically considered ordinary course for a governing body like a board of directors (e.g., approval of compensation of the Chief Compliance Officer (Section 6.2(a)(iv) the CAT NMS Plan) and approval to hold an executive session of the Operating Committee (Section 4.3(a)(v) of the CAT NMS Plan)), in addition to matters that are specific to the functioning, management and financing of the CAT System (e.g., changes to Technical Specifications (Sections 4.3(b)(vi)-(vii) of the CAT NMS Plan) and significant changes to the CAT System (Section 4.3(b)(v) of the CAT NMS Plan)).

The CAT NMS Plan sets forth a structure for decisions that the Operating Committee may make after approval of the CAT NMS Plan by the SEC. These decisions relate to events that may occur in the future as a result of the normal operation of any business (e.g., additional capital contributions (Section 3.8 of the CAT NMS Plan), approval of a loan to the Company (Section 3.9 of the CAT NMS Plan)) or that may occur due to the operation of the CAT System (e.g., the amount of the Participation Fee to be paid by a prospective Participant (Section 3.3(a) of the CAT NMS Plan)). These decisions cannot be made at the time of approval of the CAT NMS Plan because the Operating Committee will need to make its determination based on the facts and circumstances as they exist in the future. For example, in determining the appropriate Participation Fee, the Operating Committee will apply the factors identified in Section 3.3 of the CAT NMS Plan (e.g., costs of the Company and previous fees paid by other new Participants) to the facts existing at the time the prospective Participant is under consideration. Another example is the establishment of funding for the Company and fees for Participants and Industry Members. Section 11.2 of the CAT NMS Plan sets forth factors and principles that the Operating Committee will use in determining the funding of the Company. The Operating Committee then has the ability to review the annual budget and operations and costs of the CAT System to determine the appropriate funding and fees at the relevant future time. This approach, which sets forth standards at the time the CAT NMS Plan is approved that will be applied to future facts and circumstances, provides the Operating Committee with guiding principles to aid its decision-making in the future.

The Participants also recognize that certain decisions that are fundamental and significant to the operation of the Company and the CAT System must require the prior approval of the SEC, such as the use of new factors in determining a Participation Fee (Section 3.3(b)(v) of the CAT NMS Plan). In addition, any decision that requires an amendment to the CAT NMS Plan, such as termination of a Participant (Section 3.7(b) of the CAT NMS Plan), requires prior approval of the SEC (Section 12.3 of the CAT NMS Plan).

The Operating Committee has the authority to delegate administrative functions related to the management of the business and affairs of the Company to one or more Subcommittees and other Persons; however, the CAT NMS Plan expressly states that the Operating Committee may not delegate its policy-making functions (except to the extent policy-making determinations are already delegated as set forth in the CAT NMS Plan, which determinations will have been approved by the SEC) (Section 4.1 of the CAT NMS Plan). For example, the CAT NMS Plan provides for the formation of a Compliance Subcommittee to aid the Chief Compliance Officer in performing compliance functions, including (1) the maintenance of confidentiality of information submitted to the CAT; (2) the timeliness, accuracy and completeness of information; and (3) the manner and extent to which each Participant is meeting its compliance obligations under SEC Rule 613 and the CAT NMS Plan (Section 4.12(b) of the CAT NMS Plan). The Operating Committee also has delegated authority to the Plan Processor with respect to the normal day-to-day operating function of the Central Repository (Section 6.1 of the CAT NMS Plan). Nevertheless, decisions made by the Plan Processor that are more significant in nature remain subject to approval by the Operating Committee, such as decisions related to the implementation of policies and procedures (Section 6.1(c) of the CAT NMS Plan), appointment of the Chief Compliance Officer, Chief Information Officer, and Independent Auditor (Section 6.1(b) of the CAT NMS Plan), Material System Changes or any system changes for regulatory compliance (Sections 6.1(i) and 6.1(j) of the CAT NMS Plan). In addition, the Operating Committee will conduct a formal review of the Plan Processor's performance under the CAT NMS Plan on an annual basis (Section 6.1(n) of the CAT NMS Plan). As to Subcommittees that the Operating Committee may form in the future, the Participants have determined that the Operating Committee will establish a Selection Subcommittee to select a successor Plan Processor when the time arises (Section 6.1(t) of the CAT NMS Plan). In the future, the Operating Committee will take a similar approach when delegating authority by providing Subcommittees or other Persons with discretion with respect to administrative functions and retaining authority to approve decisions related to policy and other significant matters of the Company and the CAT System.

The role of the Operating Committee, including the delegation of its authority to Subcommittees and other limited Persons, as provided in the CAT NMS Plan is similar to that of other national market system plans, including the Limited Liability Company Agreement of the Options Price Reporting Authority, LLC. It also is based on rules and regulations under the Exchange Act, and general principles with respect to the governance of a limited liability company. All decisions made by the Operating Committee will be governed by the guiding principles of the CAT NMS Plan and SEC Rule 613.

Voting Criteria of the Operating Committee: This section describes the voting criteria for decisions made by the Operating Committee, which consists of a representative for each Participant, and by any Subcommittee of the Operating Committee in the management and supervision of the business of the Company and the CAT System.

A Majority Vote (an affirmative vote of at least a majority of all members of the Operating Committee or any Subcommittee authorized to vote on a particular matter) is the default standard for decisions that are typically considered ordinary course matters for a governing body like a board of directors or board of managers or that address the general governance and function of the Operating Committee and its Subcommittees. All actions of the Company requiring a vote by the Operating Committee or any Subcommittee requires authorization by a Majority Vote except for matters specified in certain sections of the CAT NMS Plan described below, which matters require either a Supermajority Vote or a unanimous vote. As a general matter, the approach adopted by the Operating Committee is consistent with the voting criteria of the NASDAQ Unlisted Trading Privileges Plan (the "NASDAQ UTP Plan"), the Limited Liability Company Agreement of the Options Price Reporting Authority, LLC, the Consolidated Quotation Plan and the Consolidated Tape Association Plan.

A Supermajority Vote (an affirmative vote of at least two-thirds of all of the members of the Operating Committee or any Subcommittee authorized to vote on a particular matter) is required to authorize decisions on matters that are outside ordinary course of business and are considered by the Participants to have a direct and significant impact on the functioning, management and financing of the CAT System. This approach was informed by similar plans (e.g., the NASDAQ UTP Plan, which requires a unanimous vote in many similar circumstances); however, the CAT NMS Plan has the lower requirement of a Supermajority Vote because overuse of the unanimity requirement makes management and oversight difficult. This approach takes into account concerns expressed by the Participants regarding management of the CAT NMS Plan, and is consistent with suggestions in the Adopting Release for the Participants to take into account the need for efficient and fair operation of the CAT NMS Plan and to consider the appropriateness of a unanimity requirement and the possibility of a governance requirement other than unanimity, or even supermajority approval, for all but the most important decisions.

The Participants believe that certain decisions that may directly impact the functioning and performance of the CAT System should be subject to the heightened standard of a Supermajority Vote, such as: selection and removal of the Plan Processor and key officers; approval of the initial Technical Specifications; approval of Material Amendments to the Technical Specifications proposed by the Plan Processor; and direct amendments to the Technical Specifications by the Operating Committee. In addition, the Participants believe the instances in which the Company enters into or modifies a Material Contract, incurs debt, makes distributions or tax elections or changes fee schedules should be limited, given that the Company is intended to operate on a break-even basis. Accordingly, those matters should also require the heightened standard of a Supermajority Vote.

A unanimous vote of all Participants is required in only three circumstances. First, a decision to obligate Participants to make a loan or capital contribution to the Company requires a unanimous vote (Section 3.8(a) of the CAT NMS Plan). Requiring Participants to provide additional financing to the Company is an event that imposes an additional and direct financial burden on each Participant, thus it is important that each Participant's approval is obtained. Second, a decision by the Participants to dissolve the Company requires unanimity (Section 10.1 of the CAT NMS Plan). The dissolution of the Company is an extraordinary event that would have a direct impact on each Participant's ability to meet its compliance requirements so it is critical that each Participant consents to this decision. Third, a unanimous vote is required if Participants decide to take an action by written consent in lieu of a meeting (Section 4.10 of the CAT NMS Plan). In that case, because Participants will not have the opportunity to discuss and exchange ideas on the matter under consideration, all Participants must sign the written consent. This approach is similar to the unanimity requirement under the Delaware General Corporation Law for decisions made by written consent of the directors of a corporation in lieu of a meeting.

Voting on Behalf of Affiliated Participants: Each Participant has one vote on the Operating Committee to permit equal representation among all the Participants. Initially, the Operating Committee will have 19 Participants. Of the 19 Participants, there are five Participants that are part of the Affiliated Participants Group and five Participants without any Affiliated Participants. Because of the relationship between the respective Affiliated Participants and given the large number of Participants on the Operating Committee, the Participants believe an efficient and effective way of structuring the Operating Committee in order to have an orderly and well-functioning committee is to permit but not require one individual to serve as a voting member for multiple Affiliated Participants. This approach does not change the standard rule that each Participant has one vote. This approach provides Affiliated Participants with the flexibility to choose whether to have one individual represent one or more of the Affiliated Participants or to have each of them represented by a separate individual. Affiliated Participants may likely vote on a matter similarly, and allowing them to choose the same individual as a voting member would be a convenient and practical way of having the Affiliated Participants' votes cast. Because there is no requirement that the representative of multiple Affiliated Participants cast the same vote for all represented Participants, there is no practical difference between this approach and an approach that mandates a separate representative for each Participant. In addition, the Participants considered whether this approach would result in less participation because of a reduced number of individuals on the Operating Committee. If each group of Affiliated Participants were to choose one individual to serve as a voting member, there would be still be 10 individuals on the Operating Committee, which the Participants do not believe would cause less active representation or participation or would otherwise lead to unwanted concentration on the Operating Committee.

Affiliated Participant Groups and Participants without Affiliations:

1. New York Stock Exchange LLC; NYSE Arca, Inc.; NYSE MKT LLC
2. The NASDAQ Stock Market LLC; NASDAQ OMX BX, Inc.; NASDAQ OMX PHLX LLC

3. BATS Exchange, Inc.; BATS Y-Exchange, Inc.; EDGX Exchange, Inc.; EDGA Exchange, Inc.
4. Chicago Board Options Exchange, Incorporated; C2 Options Exchange, Incorporated
5. International Securities Exchange, LLC; ISE Gemini, LLC
6. National Stock Exchange, Inc.
7. Chicago Stock Exchange, Inc.
8. BOX Options Exchange LLC
9. Miami International Securities Exchange LLC
10. Financial Industry Regulatory Authority, Inc.

Conflicts of Interest Definition: The Participants arrived at the definition of Conflicts of Interest set forth in Article I of the CAT NMS Plan based on a review of existing rules and standards of securities exchanges, other plans, including the Selection Plan as to qualifications of a Voting Senior Officer of a Bidding Participant, and general corporate and governance principles.

Transparency in the Bidding and Selection Process: DAG members requested input into the bidding and selection process for the Plan Processor, citing the extensive impact of CAT requirements on the industry as well as proposed cost for compliance. Specifically, Industry Members requested that non-proprietary aspects of the responses to the RFP should be available to the public to inform the discussion regarding the costs and benefits of various CAT features and the technological feasibility of different solutions. Participants, working with counsel, determined that such information could be appropriately shared with DAG members pursuant to the provisions of a non-disclosure agreement ("NDA") that was consistent with the terms of the NDA executed between the Participants and the Bidders. After extensive discussion, DAG members declined to sign such an NDA. The Participants continued to share non-bid specific information and to solicit the views and perspective of DAG members as it developed a Plan approach and related solutions.

Time Stamp Granularity and Clock Synchronization Requirement: Industry Members recommended a millisecond time stamp for electronic order and execution events and a time stamp in seconds for manual order handling. Industry Members suggested a grace period of two years after the CAT requirements are finalized to allow broker-dealers sufficient time to meet the millisecond time stamp granularity. In addition, Industry Members recommended maintaining the current OATS rule of a one second clock drift tolerance for electronic order and execution events, citing a significant burden to Industry Members to comply with a change to the current one-second clock drift.[249] Participants conducted active discussions with Industry Members on this topic, and included in the Exemptive Request Letter a request for exemptive relief related to time stamp granularity for Manual Order Events.

Equitable Cost and Funding: Industry Members expressed the view that any funding mechanism developed by the Participants should provide for equitable funding among all market participants, including the Participants. The Participants recognized the importance of this viewpoint and have incorporated it within the guiding principles that were discussed with the Industry.

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[249] *See* FIF Clock Offset Survey Preliminary Report.

Order ID/Linkages: The DAG formed an order scenarios working group to discuss approaches to satisfy the order linkage requirements of SEC Rule 613. On the topic of allocations, Industry Members provided feedback that the order and execution processes are handled via front office systems, while allocation processes are conducted in the back office. Industry Members expressed the view that creating linkages between these systems, which currently operate independently, would require extensive reengineering of middle and back office processes not just within a broker-dealer but across broker-dealers, imposing significant additional costs on the industry as a whole. Given the widespread use of average price processing accounts, clearing firms, prime brokers and self-clearing firm cannot always determine which specific order results in a given allocation or allocations. Industry Members worked closely with Participants on a proposed alternative approach which the Participants submitted to the Commission in the Exemptive Request Letters.

Elimination of Systems and Rules: The elimination of duplicative and redundant systems and rules is a critical aspect of the CAT development process. Industry DAG members including SIFMA and FIF provided broad based and comprehensive insight on the list of existing regulatory systems and Participant rules that they deem to be duplicative, including, among others, OATS, the EBS reporting system, and Large Trader reporting. In addition, FIF provided a gap analysis of CAT requirements against Large Trader transactional reporting obligations.

The Participants discussed feedback from the industry in a variety of forums: (i) during DAG meetings; (ii) in relevant Subcommittee meetings, depending on the topic; and (iii) at two multi-day offsite meetings where Representatives of each Participant gathered in a series of in-person workshops to discuss the requirements of the Plan Processor, both technical and operational. This was in addition to numerous video-conference meetings when Participants discussed and developed the RFP document incorporating, where appropriate, feedback from the industry.

12. **Discuss Reasonable Alternative Approaches that the Participants Considered to Create, Implement, and Maintain the CAT (SEC Rule 613(a)(1)(xii))**

The Participants, working as a consortium, selected the approach reflected in the Plan through a detailed analysis of alternatives, relying on both internal and external knowledge and expertise to collect and evaluate information related to the CAT. For some of the requirements of SEC Rule 613, the Participants' analysis indicated that the required approach would be unduly burdensome or complex. In these cases, the Participants have requested exemption from these requirements in the Exemptive Request Letter, which details the analysis performed and alternatives considered for these specific requirements.

The Participants leveraged their own extensive experience with regulatory, technical and securities issues in formulating, drafting and filing the CAT NMS Plan. Specifically, the nineteen Participants formed various Subcommittees to focus on specific critical issues during the development of the CAT NMS Plan. The Subcommittees included:

- a Governance Committee, which developed recommendations for decision-making protocols and voting criteria critical to the development of the CAT NMS Plan, in addition to developing formal governance and operating structures for the CAT NMS Plan;

- a Technical Committee, which developed the technical scope requirements of the CAT, the CAT RFP documents, and the PPR;

- an Industry Outreach Committee, which provided recommendations on effective methods for soliciting industry input, in addition to facilitating industry involvement in CAT-related public events[250] and development of the CAT NMS Plan and the Exemptive Request Letters;

- a Press Committee as a Subcommittee of the Industry Outreach Committee, which coordinated interactions with the press;

- a Cost and Funding Committee, which drafted a framework for determining the costs of the CAT, and provided recommendations on revenue/funding of the CAT for both initial development costs and ongoing costs; and

- an Other Products Committee, which is designed to assist the SEC, as necessary, when the SEC is determining whether and how other products should be added to the CAT.[251]

Representatives from all Subcommittees met to discuss the overall progress of the CAT initiative in the Operating Committee.

To support the Participants' internal expertise, the Participants also engaged outside experts to assist in formulating the CAT NMS Plan. Specifically, the Participants engaged the consulting firm Deloitte & Touche LLP as a project manager, and engaged the law firm Wilmer Cutler Pickering Hale and Dorr LLP to serve as legal counsel in drafting the CAT NMS Plan, both of which have extensive experience with issues raised by the CAT. Additionally, the Participants engaged the services of the public relations firm Peppercomm to assist with public relations and press engagement in formulating the CAT NMS Plan.

Furthermore, as discussed in more detail above in Appendix C, Process by Which Participants Solicited Views of Members and Other Appropriate Parties Regarding Creation, Implementation, and Maintenance of CAT; Summary of Views; and How Sponsors Took Views Into Account in Preparing NMS Plan, the Participants engaged in meaningful dialogue with Industry Members with respect to the development of the CAT through the DAG and other industry outreach events.

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[250] A summary of industry outreach events is included in Appendix C, General Industry Solicitation.

[251] When adopting the CAT, the Commission directed the Commission staff "to work with the SROs, the CFTC staff, and other regulators and market participants to determine how other asset classes, such as futures, might be added to the consolidated audit trail." Adopting Release at 45744-5 n.241.

Using this internal and external expertise, the Participants developed a process to identify, evaluate and resolve issues so as to finalize the CAT NMS Plan. As discussed above in Appendix C, the Participants have, among other things, developed the Selection Plan to describe the process for selecting the Plan Processor, created and published an RFP, evaluated Bids, and chosen a shortlist of Bids. Contemporaneously, the Participants have drafted the Plan set forth herein to reflect the recommendations that have resulted from the approach and analysis described above.

For certain technical considerations for the development and maintenance of the CAT that do not materially impact cost, required functionality or data security, the Participants did not mandate specific approaches, but rather chose to consider solutions proposed by the Bidders.

(a) Request for Proposal

The Participants considered multiple alternatives for the best approach to gathering the information necessary to determine how to create, implement and maintain the CAT, including issuance of a Request for Information ("RFI") and Request for Proposal ("RFP"). After due consideration, with a view to meeting the demanding deadline set forth in SEC Rule 613, the Participants decided to use their expertise to craft an RFP seeking proposals to implement the main requirements to successfully build and operate the CAT. This approach was designed to solicit imaginative and competitive proposals from the private sector as well as to provide an adequate amount of insight into the costs associated with creating, implementing, and maintaining the CAT.

To design the RFP process, the Participants consulted with their technology subject matter resources to determine technical implications and requirements of the CAT and to develop the RFP. Based on these requirements, the Participants developed the Proposed RFP Concepts Document,[252] which identified the high level requirements for which potential Bidders would be expected to design a solution, ahead of publishing the full RFP on February 26, 2013. The Participants received 31 intents to bid, and then hosted a Bidder conference on March 8, 2013 to discuss the requirements and provide additional context to the industry and potential Bidders. Two additional conference calls to discuss additional questions on the RFP were held on April 25, 2013 and May 2, 2013. The Participants also established an e-mail box through which questions on the RFP were received.

Ten competitive proposals were submitted on March 21, 2014. Each of the ten proposals was carefully reviewed by the Participants, including in-person meetings with each of the ten Bidders. Following this review, the Bids were reduced to six proposals in accordance with the Selection Plan approved by the Commission in February 2014. In accordance with the Selection Plan Amendment approved by the Commission on June 23, 2015, the Participants asked the Bidders on July 14, 2015 to revise their bids to account for the updated requirements included in the CAT NMS Plan as filed on February 27, 2015, as well as to address specific additional questions and considerations. As described more fully throughout this Appendix C, the proposals offer a variety of solutions for creating, implementing and maintaining the CAT.

As stated above, the Participants received proposals from ten Bidders that were deemed qualified, including many from large and well-respected information technology firms. The open ended nature of the questions contained in the RFP allowed Bidders to provide thoughtful and creative responses with regards to all aspects of the implementation and the operation of the CAT. The RFP process also resulted in the submission of multiple competitively-priced Bids. The six Shortlisted Bids remaining under consideration by the Participants, inclusive of the initial system build and the first five years of maintenance costs, have ranges between $165 million and $556 million, and encompass a number of innovative approaches to meeting the requirements of SEC Rule 613, such as use of non-traditional database architectures and cloud-based infrastructure solutions.

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[252] *See supra* note 15.

The Participants conducted the RFP process and the review of Bids pursuant to the Selection Plan approved by the Commission, which was designed to mitigate the conflicts of interest associated with Participants that are participating in developing the CAT while also seeking to become the Plan Processor and to ensure a level playing field for all potential Bidders to be considered on a fair and equal basis.

(b) Organizational Structure

The Participants considered various organizational structures of the Bidders to assess whether a particular structure would be a material factor in the ability of a Bidder to effectively operate as the Plan Processor. Of the Bids submitted, three general organizational structures for the Plan Processor emerged: (1) consortiums or partnerships (i.e., the Plan Processor would consist of more than one unaffiliated entity that would operate the CAT); (2) single firms (i.e., one entity would be the Plan Processor and that entity would operate the CAT as part of its other ongoing business operations); and (3) dedicated legal entities (i.e., CAT operations would be conducted in a separate legal entity that would perform no other business activities). Each type of organizational structure has strengths and limitations, but the Participants did not find that a particular organizational structure should be a material factor in selecting a Bidder. Accordingly the Participants have not mandated a specific organizational structure for the Plan Processor.

(c) Primary Storage

The Bidders proposed two methods of primary data storage: traditionally-hosted storage architecture, and infrastructure-as-a-service. Traditionally-hosted storage architecture is a model in which an organization would purchase and maintain proprietary servers and other hardware to store CAT Data. Infrastructure-as-a-service is a provisioning model in which an organization outsources the equipment used to support operations, including storage, hardware, servers and networking components to a third party who charges for the service on a usage basis.

Each data storage method has a number of considerations that the Participants will take into account when evaluating each Bidder's proposed solution. Such considerations include the maturity, cost, complexity, and reliability of the data storage method as used in each Bidder's proposal. The Participants are not mandating a specific method for primary data storage provided that the data storage solution can meet the security, reliability, and accessibility requirements for the CAT, including storage of PII data, separately.

(d) Customer and Account Data

All Bidders proposed solutions consistent with the Customer Information Approach in which broker-dealers would report a unique Firm Designated ID for each Customer to the Plan Processor and the Plan Processor would create and store the CAT Customer-ID without passing this information back to the broker-dealer. The use of existing unique identifiers (such as internal firm customer identifiers) could minimize potentially large overhead in the CAT System that otherwise would be required to create and transmit back to CAT Reporters a CAT System-generated unique identifiers. Allowing multiple identifiers also will be more beneficial to CAT Reporters. This approach would still require mapping of identifiers to connect all trading associated with a single Customer across multiple accounts, but it would also ease the burden on CAT Reporters because each CAT Reporter would report information using existing identifiers it currently uses in its internal systems. Moreover, because the CAT System would not be sending a CAT System-generated Customer-ID back to the CAT Reporters, CAT Reporters would not need to process CAT Customer-IDs assigned by the Plan Processor. This approach would reduce the burden on the CAT Reporters because they would not need to build an additional process to receive a Customer-ID and append that identifier to each order origination, receipt or cancellation. This approach may also help alleviate storage and processing costs and potentially reduce the security risk of transmission of the Customer-ID to the CAT Reporter.

The Participants support the use of the Customer Information Approach and included the approach in the Exemptive Request Letter so that the Central Repository could utilize this approach to link Customer and Customer Account Information. The Participants believe this approach would be the most efficient approach for both the Plan Processor and CAT Reporters.

(e) Personally Identifying Information (PII)

All Bidders proposed encrypting all PII, both at rest and in motion. This approach allows for secure storage of PII, even if servers should be compromised or data should be leaked. However, encryption can be highly complex to implement effectively (e.g., the poor choice of password salting or an insecure storage of private keys can compromise security, even without knowledge of the system administrator).

All Bidders also proposed imposing a Role Based Access Control[253] to PII. These controls would allow for varying levels of access depending on user needs, and would allow compartmentalizing access based on "need to know." However, multiple layers of access can add further complexity to the implementation and use of a system.

Some Bidders also proposed implementing multi-factor authentication[254]. This greatly enhances security and can prevent a leak of passwords or keys from completely compromising security. However, it increases system overhead, and increases the difficulty of accessing data.

The Participants are requiring multi-factor authentication and Role Based Access Control for access to PII, separation of PII from other CAT Data, restricted access to PII (only those with a "need to know" will have access), and an auditable record of all access to PII data contained in the

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[253] Role Based Access Control (RBAC) is a mechanism for authentication in which users are assigned to one or many roles, and each role is assigned a defined set of permissions. Additional details are provided in Appendix D, Data Security.

[254] Multifactor authentication is a mechanism that requires the user to provide more than one factor (e.g., biometrics/ personal information in addition to a password) in order to be validated by the system.

Central Repository. The Participants believe potential increased costs to the Plan Processor and delays that this could cause to accessing PII are balanced by the need to protect PII.

(f) Data Ingestion Format

Bidders proposed several approaches for the ingestion format for CAT Data: uniform defined format, use of existing messaging protocols or a hybrid approach whereby data can be submitted in a uniform defined format or using existing message protocols. There are benefits to the industry under any of the three formats. A large portion of the industry currently reports to OATS in a uniform defined format. These firms have invested time and resources to develop a process for reporting to OATS. The uniform formats recommended by the Bidders would leverage the OATS format and enhance it to meet the requirements of SEC Rule 613. This uniform format, therefore, may reduce the burden on certain CAT Reporters and simplify the process for those CAT Reporters to implement the CAT. However, some firms use message protocols, like FIX, as a standard point of reference with Industry Members that is typically used across the order lifecycle and within a firm's order management processes. Leveraging existing messaging protocols could result in quicker implementation times and simplify data aggregation for Participants, CAT Reporters, and the Plan Processor, though it is worth noting that message formats may need to be updated to support CAT Data requirements.

The Participants are not mandating the data ingestion format for the CAT. The Participants believe that the nature of the data ingestion is key to the architecture of the CAT. A cost study of members of the Participants did not reveal a strong cost preference for using an existing file format for reporting vs. creating a new format.[255] However, FIF did indicate there was an industry preference among its members for using the FIX protocol.[256]

(g) Process to Develop the CAT

Bidders proposed several processes for development of the CAT: the agile or iterative development model, the waterfall model, and hybrid models that incorporate aspects of both the waterfall and agile methodologies. An agile methodology is an iterative model in which development is staggered and provides for continuous evolution of requirements and solutions. A waterfall model is a sequential process of software development with dedicated phases for Conception, Initiation, Analysis, Design, Construction, Testing, Production/ Implementation and Maintenance. The agile or iterative model is flexible to changes and facilitates early delivery of usable software that can be used for testing and feedback, helping to facilitate software that meets users' needs. However, at the beginning of an agile or iterative development process, it can be difficult to accurately estimate the effort and time required for completion. The waterfall model would provide an up-front estimate of time and effort and would facilitate longer-term planning and coordination among multiple vendors or project streams. However, the waterfall model could be less flexible to changes, particularly changes that occur between design and delivery (and thereby potentially producing software that meets specifications but not user needs).

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[255] *See* Appendix C, Analysis of the CAT NMS Plan, for additional details on cost studies.
[256] *See* FIF Response.

The Participants are not mandating a development process. The Participants believe that either agile or iterative development or waterfall method or even a combination of both methods could be utilized to manage the development of CAT.

(h) Industry Testing

Bidders also proposed a range of approaches to industry testing, including dedicated environments, re-use of existing environments, scheduled testing events, and ongoing testing.

Dedicated industry test environments could provide the possibility of continuous testing by participants, rather than allow for testing only on scheduled dates. Use of dedicated industry test environments also would not impact other ongoing operations (such as disaster recovery sites). However, developing and maintaining dedicated test environments would entail additional complexity and expense. Such expenses may be highest in hosted architecture systems where dedicated hardware would be needed, but potentially rarely used.

The re-use of existing environments, such as disaster recovery environment, would provide simplicity and lower administrative costs. However, it could impact other ongoing operations, such as disaster recovery.

Scheduled testing events (which might be held, for example, on weekends only, or on specific dates throughout the year) could provide for more realistic testing by involving multiple market participants. This approach also would not require the test environment to be available at all times. However, scheduled events would not allow users to test on the CAT System until a dedicated time window is open.

Ongoing testing would allow users to test the CAT System as often as needed. However, this approach would require the test environment to be available at all times. It also may lead to lower levels of test participation at any given time, which may lead to less realistic testing.

The Participants are requiring that the CAT provide a dedicated test environment that is functionally equivalent to the production environment and available on a 24x6 basis. The Participants believe that an ongoing testing model will be more helpful to the industry because it will provide an environment in which to test any internal system changes or updates that may occur in the course of their business that may affect reporting to the CAT. Additionally, this environment will provide a resource through which the CAT Reporters can continually test any CAT System mandated or rule associated changes to identify and reduce data errors prior to the changes being implemented in the production environment.

(i) Quality Assurance (QA)

The Participants considered a number of QA approaches and methodologies, informed by the Bidder's proposals as well as discussions with the Participants' own subject matter resources. Some of the approaches considered included "continuous integration," where developer working copies are merged into the master and tested several times a day, test automation, and various industry standards such as ISO 20000/ITIL. The Participants are not mandating a single approach to QA beyond the requirements detailed in the RFP, for which each Bidder provided a detailed approach.

One key component of the QA approaches proposed by the Bidders was the staffing levels associated with QA. Initial QA proposals from Bidders included staffing ranges from between 2 and 90 FTEs, although some Bidders indicated that their QA function was directly incorporated into their development function. Some Bidders proposed allocating QA resources after the third month. A larger number of QA resources may facilitate structured, in-depth testing and validation of the CAT System. However, a larger set of QA resources could lead to higher fixed costs and administrative overhead.

The Participants are not mandating the size for QA staffing; however, the Participants will consider each Bidder's QA staffing proposals in the context of the overall Bid, and the selected Bidder must ensure that its QA staffing is sufficient to perform the activities required by the CAT NMS Plan. The Participants believe the QA staffing numbers varied in the Bids because they are largely dependent on both the staffing philosophy of the Bidder as well as the organizational structure for the proposed Central Repository.

(j) User Support and Help Desk

The RFP required that the CAT Help Desk be available on a 24x7 basis, and that it be able to manage 2,500 calls per month. To comply with these requirements, Bidders proposed user support staffing ranges from five to 36 FTEs. They also proposed dedicated support teams and support teams shared with other groups.

A larger number of FTE user support staff could provide a higher level and quality of support. However, a higher number of staff would impose additional overhead and administrative costs. Additionally, as the support organization grows, it may become less closely integrated with the development team, which could decrease support effectiveness.

A dedicated CAT support team would facilitate deep knowledge of the CAT System and industry practices. However, it would create additional overhead and costs. Additionally, management of support teams may not be the managing firm's primary business, which could lead to inefficiencies. A support staff shared with non-CAT teams could provide for increased efficiency, if the team has greater experience in support more broadly. However, support resources may not have the depth of knowledge that dedicated support teams could be expected to develop.

The Participants are not requiring specific FTEs for user support staffing; however, the Participants will consider each Bidder's user support staffing proposals in the context of the overall Bid, and the selected Bidder must ensure that its staffing is sufficient to perform the activities required by the CAT NMS Plan. The Participants believe that the number of FTEs varied in the Bids because they are largely dependent on both the staffing philosophy of the Bidder as well as the organizational structure for the proposed Central Repository.

Some Bidders proposed a US-based help desk, while others proposed basing it offshore. A U.S.-based help desk could facilitate a higher level of service, and could provide a greater level of security (given the sensitive nature of the CAT). However, a U.S.-based help desk may have greater labor costs. An offshore help desk would potentially have lower labor costs, but could provide (actual or perceived) lower level of service, and could raise security concerns (particularly where the help desk resources are employed by a third-party).

The Participants are not requiring a specific location for the help desk. The Participants believe that as long as the Bidder's solution meets the service and security requirements of the CAT, it is not necessary to prescribe the location.

(k) CAT User Management

Bidders proposed several approaches to user management[257]: help desk creation of user accounts, user (e.g., broker-dealer) creation of accounts, and multi-role. Help desk creation of accounts would allow for greater oversight and validation of user creation. However, it would increase administrative costs, particularly in the early stages of the CAT (as an FTE must setup each user). User creation of accounts would require lower staffing levels but would provide less oversight and validation of user creation.

A multi-role approach would allow for a blended approach in which the Plan Processor could, for example, set up an administrator at each broker-dealer, and then allow the broker-dealer to set up additional accounts as needed. This approach could allow users with different levels of access to be provisioned differently, with those requiring greater oversight being provisioned manually. However, it would add complexity to the user creation system, and would provide less oversight and validation than would a fully manual system.

For CAT Reporters entering information into the CAT, the Participants are requiring that each user be validated by the Plan Processor to set-up access to the system. However, for staff at regulators that will be accessing the information for regulatory purposes only, the Plan Processor can establish a set-up administrator who has the ability to provide access to other users within its organization. However, such administrators cannot set up access for PII information. Staff at regulators who need access to PII information must go through an authentication process directly with the Plan Processor. The Participants believe that this approach balances the demand on the staff at the Plan Processor with the need to ensure proper oversight and validation for users of the CAT.

(l) Required Reportable Order Events

The Participants considered multiple order event types for inclusion in the Plan. Of the order event types considered, the results order event type and the CAT feedback order event were not required. The Participants determined that a results order event type would not provide additional value over a "daisy chain" linkage method. A CAT feedback order event can be generated by the Plan Processor, thereby removing the reporting burden from reporting firms. Therefore the Participants are not requiring CAT Reporters to provide data for these two event types to the CAT. The required reportable order events are listed in Section 6.3(d).

(m) Data Retention Requirements

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[257] User management is a business function that grants, controls, and maintains user access to a system.

SEC Rule 613(e)(8) requires data to be available and searchable for a period of not less than five years. Broker-dealers are currently required to retain data for six years under the Exchange Act Rule 17a-4(a).

The Participants support the use of a six year retention timeframe as it complies with Exchange Act Rule 17a-4(a). The Participants are requiring data for six years to be kept online in an easily accessible format to enable regulators to have access to six years of audit trail materials for purposes of its regulation.

The Participants understand that requiring this sixth year of data storage may increase the cost to run the CAT; however, they believe the incremental cost would be outweighed by the needs of regulators to have access to the information. An analysis of the six Shortlisted Bidder proposals indicated that the average expected year-on-year annual cost increase during years four and five (i.e., once all reporters were reporting to the Central Repository) was approximately 4%. Extending this increase to another year would result in incremental annual costs to the Plan Processor ranging from approximately $1.15 million to $4.44 million depending upon the Bidder. Based on the assumption that the cumulative annual cost increase from year five to year six will also be 4% (including all the components provided by the Bidders in their respective cost schedules[258]), the maximum cost increase for data retention for an additional year would be 4%.

(n) Data Feed Connectivity

Bidders proposed either real-time SIP connectivity or end-of-day batch SIP connectivity. Real-time SIP connectivity would provide for more rapid access to SIP Data, but may require additional processing support to deal with out-of-sequence or missing records. End-of-day batch SIP connectivity provides the possibility of simpler implementation, but data from SIPs would not be available in the CAT until after overnight processing. Because CAT Reporters are only required to report order information on a next-day basis, the Participants are not requiring that the Plan Processor have real-time SIP connectivity.

(o) Disaster Recovery

Participants discussed two commonly accepted structures for disaster recovery: hot-hot[259] and hot-warm[260]. While hot-hot allows for immediate cutover, the Participants agreed that real-time synchronization was not required, but rather that data must be kept synchronized to satisfy disaster recovery timing requirements (e.g., 48 hour cutover). A hot-warm structure meets the requirements of SEC Rule 613, and costs for hot-hot were considered to be higher than hot-warm. Therefore, the Participants are requiring a hot-warm disaster recovery structure, provided it meets the requirements set forth in Appendix D, BCP / DR Process.

(p) Synchronization of Business Clocks

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[258] RFP at 57.

[259] In a hot-hot disaster recovery design, both the production site as well as the backup site are live, and the backup can be brought online immediately.

[260] In a hot-warm disaster recovery design, the backup site is fully equipped with the necessary hardware. In the event of a disaster, the software and data would need to be loaded into the backup site for it to become operational.

The Participants considered multiple levels of precision for the clock synchronization standard set forth in the plan, ranging from 1 second (s) to 100 microseconds (µs). The Participants determined based on their expertise and feedback from industry that an initial clock synchronization of 50 milliseconds (ms) would be the most practical and effective choice and represents the current industry standard. Pursuant to SEC Rule 613(d), the initial standard of 50ms will be subject to annual analysis as to whether or not a more stringent clock synchronization tolerance could be implemented consistent with changes in industry standards.

In order to identify the industry standard the Participants and Industry Members reviewed their own internal technology around Network Time Protocol ("NTP") and Precision Time Protocol ("PTP"),[261] potentially used in conjunction with Global Positioning System ("GPS").[262] In reviewing internal infrastructure, the Participants and Industry Members noted that the majority of firms had indicated that they leveraged at least NTP clock synchronization technology. In addition, the FIF conducted a clock synchronization survey[263] ("FIF Clock Offset Survey") of 28 firms to identify costs and challenges associated with clock synchronization tolerances of 50ms, 5ms, 1ms, and 100µs. The FIF Clock Offset Survey indicated that 93% of responding firms leverage NTP technology, while fewer than half of responding firms use SNTP, PTP, or GPS. In reviewing the standards for NTP technology, the Participants determined that this technology can accommodate a 50ms tolerance. In addition, the FIF Clock Offset Survey demonstrated that 60% of responding firms currently synchronize their clocks with an offset of 50ms or greater, with approximately 20% of responding firms currently using an offset of 50ms. Only 18% of responding firms used a clock offset of 30ms or less. In light of these reviews and the survey data, the Participants concluded that a clock offset of 50ms represents an aggressive, but achievable, industry standard.

In addition to determining current industry clock offset standards used in the industry, the FIF Clock Offset Survey indicated that the costs to survey respondents were as follows:[264]

Proposed Clock Offset	Estimated Implementation Cost (per firm)	Estimated Annual Maintenance Cost (per firm)
50ms	$554,348	$313,043
5ms	$887,500	$482,609
1ms	$1,141,667	$534,783
100µs	$1,550,000	$783,333

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[261] NTP and PTP are protocols used to synchronize clocks across a computer network.
[262] GPS is a radio navigation system that can be used to capture a precise determination of time.
[263] FIF Clock Offset Survey Preliminary Report.
[264] The Participants consider the estimates provided to be conservative as a majority of the study respondents fell into the category of large broker-dealers.

As indicated in the above table, annual maintenance costs of survey respondents for a 50ms standard would be on average 31% higher than current costs, and would escalate to 102%, 123%, and 242% increases over current maintenance costs as clock synchronization standards move to 5ms, 1ms, and 100μs respectively, indicating that maintenance costs rapidly escalate as clock synchronization standards increase beyond 50ms. Survey respondents also indicated that increasing clock synchronization requirements would require escalating technology changes, including significant hardware changes (such as installation of dedicated GPS or other hardware clocks and network architecture redesign), migration to new time synchronization standards, and widespread upgrades of operating systems and databases currently in use. For example, to achieve a 5ms clock offset would require firms to install GPS clocks in all locations and migrate from NTP to PTP. The Participants believe, based on the FIF Clock Offset Survey, that fewer than half of firms currently leverage GPS technology or PTP for clock synchronization.

As noted in Article VI, Section 6.8, the Participants, working with the Processor's Chief Compliance Officer, shall annually evaluate and make recommendations as to whether industry standards have evolved such that changes to the clock synchronization standards should be changed. It is the belief of the Participants that, while setting an initial clock synchronization of 5ms lower than 50ms may be achievable, it does not represent current industry standard and there may be challenges with small broker-dealers' potentially substantial costs. However, once both large and small broker-dealers begin reporting data to the Central Repository, and as increased time synchronization standards become more mature, the Participants will assess the ability to tighten the clock synchronization standards to reflect changes in industry standards in accordance with SEC Rule 613.

(q) Reportable Securities

SEC Rule 613(c)(6) requires NMS Securities to be reported the Central Repository and SEC Rule 613(i) requires the Participants to detail a plan outlining how non-NMS Securities, debt securities, and Primary Market Transactions in equity securities that are not NMS Securities can be reported to the Central Repository in the future. The Participants considered whether to require including OTC Equity Securities, non NMS Securities, in a future phase of the CAT NMS Plan, as contemplated by the Commission in SEC Rule 613, or accelerating their inclusion into the first phase of the Plan. As part of this consideration, Participants weighed heavily the feedback from the DAG and other market participants of the considerations associated with the two alternatives, and made the determination to include OTC Equities in the requirements under the CAT NMS Plan.

APPENDIX D

CAT NMS Plan Processor Requirements

Appendix D, CAT NMS Plan Processor Requirements, outlines minimum functional and technical requirements established by the Participants of the CAT NMS Plan for the Plan Processor. Given the technical nature of many of these requirements, it is anticipated, as technology evolves, that some may change over time. The Participants recognize that effective oversight of, and a collaborative working relationship with, the Plan Processor will be critical to ensure the CAT achieves its intended purpose, namely enhanced investor protection, in an efficient and cost-effective manner. The Participants also recognize that maintaining the efficiency and cost-effectiveness of the CAT requires flexibility to respond to technological innovations and market changes. For example, these minimum functional and technical requirements allow the Plan Processor flexibility to make certain changes to the Technical Specifications, while limiting others to the Operating Committee, and anticipate agreement between the Operating Committee and the Plan Processor on SLAs relating to, among other things, development, change management, and implementation processes and timelines. Maintaining such flexibility to adapt in these and other areas relating to the development and operation of the CAT is a foundational principle of this Appendix D.

1. Central Repository Requirements

1.1 Technical Architecture Requirements

The Central Repository must be designed and sized to ingest, process, and store large volumes of data. The technical infrastructure needs to be scalable, adaptable to new requirements and operable within a rigorous processing and control environment. As a result, the technical infrastructure will require an environment with significant throughput capabilities, advanced data management services and robust processing architecture.

The technical architecture must be scalable and able to readily expand its capacity to process significant increases in data volumes beyond the baseline capacity. The baseline capacity requirements are defined in this document. Once the CAT NMS Plan is approved, the Operating Committee will define the baseline metrics on an ongoing basis. CAT capacity planning must include SIP, OPRA and exchange capacity and growth forecasts. The initial baseline capacity requirements will be based on twice (2X) the historical peaks for the most recent six years, and the Plan Processor must be prepared to handle peaks in volume that could exceed this baseline for short periods. The SLA(s) will outline details of the technical performance and scalability requirements, and will be specifically targeted to the selected Bidder's solution.

The Central Repository must have the capacity and capability to:

- Ingest and process throughput to meet baseline capacity requirements as well as scalability to meet peak capacity requirements, including staging, loading, speed of processing, and linking of data;

- Accommodate data storage and query compute, such as:

  - Scalable for growth data storage and expansion capability, including but not limited to, resizing of database(s), data redistribution across nodes, and resizing of network bandwidth;
  - Robust processes to seamlessly add capacity without affecting the online operation and performance of the CAT System; and
  - Quantitative methods for measuring, monitoring, and reporting of excess capacity of the solution;

- Satisfy minimum processing standards as described in the CAT RFP and that will be further defined in the SLA(s);

- Adapt to support future technology developments and new requirements (including considerations for anticipated/potential changes to applicable rules and market behavior);

- Handle an extensible architecture that is capable of supporting asset classes beyond the initial scope of NMS Securities and OTC Equity Securities;

- Comply with the clock synchronization standards as set forth in Article VI, Section 6.8; and

- Handle an extensible data model and messaging protocols that are able to support future requirements such as, but not limited to:

  - Expansion of trading hours, including capability and support for 24-hour markets;
  - Sessions for securities;[265] and
  - New asset classes, such as debt securities or derivative instruments.

1.2 Technical Environments

The architecture must include environments for production, development, quality assurance testing, disaster recovery, industry-wide coordinated testing, and individual on-going CAT Reporter testing. The building and introduction of environments available to CAT Reporters may be phased in to align with the following agreed upon implementation milestones:

- Development environment – the development environment must be created to build, develop, and maintain enhancements and new requirements. This environment must be separate from those listed below.

- Quality assurance environment – a quality assurance (QA) environment must be created to allow simulation and testing of all applications, interfaces, and data integration points contained in the CAT System.

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[265] Equity markets currently have morning, primary, and evening sessions. It is possible that over time sessions may cross into the next calendar day.

  - The QA environment shall be able to simulate end-to-end production functionality and perform with the same operational characteristics, including processing speed, as the production environment.
  - The QA environment shall support varied types of changes, such as, but not limited to, the following:
    - Application patches;
    - Bug fixes;
    - Operating system upgrades;
    - Introduction of new hardware or software components;
    - New functionality;
    - Network changes;
    - Regression testing of existing functionality;
    - Stress or load testing (simulation of production-level usage); and
    - Recovery and failover.
  - A comprehensive test plan for each build and subsequent releases must be documented.

- Production environment – fully operational environment that supports receipt, ingestion, processing and storage of CAT Data. Backup/disaster recovery components must be included as part of the production environment.

- Industry test environment –
  - The Plan Processor must provide an environment supporting industry testing (test environment) that is functionally equivalent to the production environment, including:
    - End-to-end functionality (e.g., data validation, processing, linkage, error identification, correction and reporting mechanism) from ingestion to output, sized to meet the standards of the production SLA;
    - Performance metrics that mirror the production environment; and
    - Management with the same information security policies applicable to the production environment.
  - The industry test environment must also contain functionality to support industry testing, including:
    - Minimum availability of 24x6;
    - Replica of production data when needed for testing;
    - Data storage sized to meet varying needs, dependent upon scope and test scenarios; and
    - Support of two versions of code (current and pending).

- The industry test environment must support the following types of industry testing:
    - Technical upgrades made by the Plan Processor;
    - CAT code releases that impact CAT Reporters;
    - Changes to industry data feeds (e.g., SIP, OPRA, etc.);
    - Industry-wide disaster recovery testing;
    - Individual CAT Reporter and Data Submitter testing of their upgrades against CAT interfaces and functionality; and
    - Multiple, simultaneous CAT Reporter testing.
- The industry test environment must be a discrete environment separate from the production environment.
- The Plan Processor must provide the linkage processing of data submitted during coordinated, scheduled, industry-wide testing. Results of the linkage processes must be communicated back to Participants as well as to the Operating Committee.
- Data from industry testing must be saved for three months. Operational metrics associated with industry testing (including but not limited to testing results, firms who participated, and amount of data reported and linked) must be stored for the same duration as the CAT production data.
- The Plan Processor must provide support for industry testing, including testing procedures, coordination of industry testing, publish notifications, and provide help desk support during industry testing.
- The Participants and the SEC must have access to industry test data.

1.3 Capacity Requirements

System capacity must have the following characteristics.[266]

The Central Repository must be:

- Designed such that additional capacity can be quickly and seamlessly integrated while maintaining system access and availability requirements;

- Able to efficiently and effectively handle data ingestion on days with peak and above-peak data submission volumes; and

- Required to maintain and store data for a 6-year sliding window of data. System access and availability requirements must be maintained during the maintenance of the sliding window. It is expected that the Central Repository will grow to more than 29 petabytes of raw, uncompressed data.

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[266] References to data sizing refer to raw, uncompressed data and do not account for benefits of compression, overhead of data storage or indices. Data sizing estimates do not include meta-data and are based on delimited, fixed length data sets. The Plan Processor is responsible for calculating its platform capacity capabilities based on its proposed solution. Three years after the finalization of the CAT NMS Plan, when all CAT Reporters submit their data to the Central Repository, the Central Repository must be sized to receive process and load more than 58 billion records per day.

The Plan Processor must:

- Define a capacity planning process to be approved by the Operating Committee, with such process incorporating industry utility capacity metrics; and

- Develop a robust process to add capacity, including both the ability to scale the environment to meet the expected annual increases as well as to rapidly expand the environment should unexpected peaks in data volumes breach the defined capacity baseline. Capacity forecasts from systems, including OPRA, UTP, and CTA, must also be included for capacity planning purposes. This capacity planning process must be approved by the Operating Committee.

1.3.1 Monitoring Capacity Utilization and Performance Optimization

In order to manage the data volume, operational capacity planning must be conducted on a periodic basis. The Plan Processor must submit capacity-planning metrics to the Operating Committee for review to ensure that all parties are aware of the system processing capabilities and changes to assumptions. Changes to assumptions could lead to positive or negative adjustments in the costs charged to CAT Reporters. Reports that capture daily disk space, processing time, amount of data received and linkage completion times must be provided by the Plan Processor to the Operating Committee.

1.4 Data Retention Requirements

The Plan Processor must develop a formal record retention policy and program for the CAT, to be approved by the Operating Committee, which will, at a minimum:

- Contain requirements associated with data retention, maintenance, destruction, and holds;

- Comply with applicable SEC record-keeping requirements;

- Have a record hold program where specific CAT Data can be archived offline for as long as necessary;

- Store and retain both raw data submitted by CAT Reporters and processed data; and

- Make data directly available and searchable electronically without manual intervention for at least six years.

2. Data Management

The Plan Processor must develop data management policies and procedures to govern and manage CAT Data, reference data, and metadata contained in and used by the Central Repository.

The CAT must capture, store, and maintain current and historical reference data information. This master / reference database will include data elements such as, but not limited to, SRO-assigned market participant identifiers, product type, trading unit size, trade / quote minimum price variation, corporate actions, symbology changes, and changes in listings market center. The Plan Processor must support bi-temporal milestones (e.g., Effective Date and as-of-date) of the reference data.

CAT Reporters will submit data to the Central Repository with the listing exchange symbology format. The Central Repository must use the listing exchange symbology format for output of the linked data. Instrument validation must be included in the processing of data submitted by CAT Reporters.

The Central Repository must be able to link instrument data across any time period so that data can be properly displayed and linked regardless of changes to issue symbols or market class. The Plan Processor is required to create and maintain a symbol history and mapping table, as well as to provide a tool that will display a complete issue symbol history that will be accessible to CAT Reporters, Participants and the SEC. In addition, the Plan Processor will be required to create a start-of-day ("SOD") and end-of-day ("EOD") CAT reportable list of securities for use by CAT Reporters. This list must be available online and in a machine readable (e.g., .csv) format by 6 a.m. on each Trading Day.

Queries, reports, and searches for data that span dates where there are changes to reference data must automatically include data within the requested date range. For example, if a query is run for a symbol that had three issue symbol changes during the time window of the query parameters, the result set must automatically include data for all three symbols that were in use during the time window of the query.

The Plan Processor must also develop an end-to-end process and framework for technical, business and operational metadata.

2.1 Data Types and Sources

The Plan Processor will be responsible for developing detailed data and interface specifications for data to be submitted by CAT Reporters. These specifications will be contained in the Technical Specifications, the initial version of which will be presented to the Operating Committee for approval. The Technical Specifications must be designed to capture all of the data elements required by SEC Rule 613, as well as other information the Participants determine necessary to facilitate elimination of reporting systems that the CAT may cause to be redundant, such as EBS and OATS. In the future, new data sources such as public news may be added to the specifications.

CAT Reporters and Data Submitters will transmit data in an electronic data format(s) that will be defined by the Plan Processor. The Technical Specifications must include details for connectivity and electronic submission, transmission, retransmission and processing. It is possible that more than one format will be defined to support the various senders throughout the industry.

The Participants anticipate that some broker-dealers will not directly report to the CAT but will rely on other organizations to report on their behalf. However, the CAT will need to have the flexibility to adapt on a timely basis to changes in the number of entities that report CAT Data.

2.2 Data Feed Management

The Plan Processor must monitor and manage incoming and outgoing data feeds for, at a minimum, the following:

- Data files from each CAT Reporter and Data Submitter;
- Files that cover multiple trade dates (e.g., to account for clearing and changes);
- Full and partial file submissions that contain corrections from previously rejected files;
- Full and partial file submissions based on CAT Reporter; and
- Receipt and processing of market data feeds (SIP, OPRA, OCC).

The Plan Processor must also develop a process for detecting, managing, and mitigating duplicate file submissions. It must create and store operational logs of transmissions, success, and failure reasons in order to create reports for CAT Reporters, Participants, and the SEC. Outgoing data feeds must be logged and corresponding metadata elements must be monitored and captured.

2.2.1 Managing connectivity for data feeds (e.g., SIPs, broker-dealers and regulators)

The Plan Processor will be required to ensure that it provides all CAT Reporters with the ability to transmit CAT Data to the Central Repository as required to meet the reporting requirements. The Plan Processer is required to have a robust managed file transfer ("MFT") tool, including full monitoring, permissioning, auditing, security, high availability,[267] file integrity checks, identification of data transmission failures / errors, transmission performance metrics, multiple transmission protocols, Latency / network bottlenecks or delays, key management, etc. CAT Reporters must also have the ability to conduct manual data entry via a GUI interface or the uploading of a file, subject to a maximum record capacity, which will be defined by the Plan Processor in consultation with the Operating Committee.

3. Reporting and Linkage Requirements

All CAT Data reported to the Central Repository must be processed and assembled to create the complete lifecycle of each Reportable Event. Reportable Events must contain data elements sufficient to ensure the same regulatory coverage currently provided by existing regulatory reporting systems that have been identified as candidates for retirement.

Additionally, the Central Repository must be able to:

- Assign a unique CAT-Reporter-ID to all reports submitted to the system based on sub-identifiers, (e.g., MPIDs, ETPID, trading mnemonic) currently used by CAT Reporters in their order handling and trading processes.

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[267] To be defined in the SLAs to be agreed to between the Participants and the Plan Processor, as detailed in Appendix D, Functionality of the CAT System.

- Handle duplicate sub-identifiers used by members of different Participants to be properly associated with each Participant.

- Generate and associate one or more Customer-IDs with all Reportable Events representing new orders received from a Customer(s) of a CAT Reporter. The Customer-ID(s) will be generated from a Firm Designated ID provided by the CAT Reporter for each such event, which will be included on all new order events.

- Accept time stamps on order events handled electronically to the finest level of granularity captured by CAT Reporters. Additionally, the CAT must be able to expand the time stamp field to accept time stamps to an even finer granularity as trading systems expand to capture time stamps in ever finer granularity. The Plan Processor must normalize all processed date/time CAT Data into a standard time zone/format.

In addition, the data required from CAT Reporters will include all events and data elements required by the Plan Processor in the Technical Specifications to build the:

- Life cycle of an order for defined events within a CAT Reporter;

- Life cycle of an order for defined events intra-CAT Reporter; and

- State of all orders across all CAT Reporters at any point in time.

The Plan Processor must use the "daisy chain approach" to link and create the order lifecycle. In the daisy chain approach, a series of unique order identifiers, assigned to all order events handled by CAT Reporters are linked together by the Central Repository and assigned a single CAT-generated CAT-Order-ID that is associated with each individual order event and used to create the complete lifecycle of an order.

By using the daisy chain approach the Plan Processor must be able to link all related order events from all CAT Reporters involved in the lifecycle of an order. At a minimum, the Central Repository must be able to create the lifecycle between:

- All order events handled within an individual CAT Reporter, including orders routed to internal desks or departments with different functions (e.g., an internal ATS);

- Customer orders to "representative" orders created in firm accounts for the purpose of facilitating a customer order (e.g., linking a customer order handled on a riskless principal basis to the street-side proprietary order);

- Orders routed between broker-dealers;

- Orders routed from broker-dealers to exchanges;

- Orders sent from an exchange to its routing broker-dealer;

- Executed orders and trade reports;

- Various legs of option/equity complex orders; and
- Order events for all equity and option order handling scenarios that are currently or may potentially be used by CAT Reporters, including:
    - Agency route to another broker-dealer or exchange;
    - Riskless principal route to another broker-dealer or exchange capturing within the lifecycle both the customer leg and street side principal leg;
    - Orders routed from one exchange through a routing broker-dealer to a second exchange;
    - Orders worked through an average price account capturing both the individual street side execution(s) and the average price fill to the Customer;
    - Orders aggregated with other orders for further routing and execution capturing both the street side executions for the aggregated order and the fills to each customer order;
    - Complex orders involving one or more options legs and an equity leg, with a linkage between the option and equity legs;
    - Complex orders containing more legs than an exchange's order management system can accept, causing the original order to be broken into multiple orders;
    - Orders negotiated over the telephone or via a negotiation system;
    - Orders routed on an agency basis to a foreign exchange;
    - Execution of customer order via allocation of shares from a pre-existing principal order;
    - Market maker quotes; and
    - Complex orders involving two or more options legs.

Additionally, the Central Repository must be able to:

- Link each order lifecycle back to the originating Customer;
- Integrate and appropriately link reports representing repairs of original submissions that are rejected by the CAT due to a failure to meet a particular data validation;
- Integrate into the CAT and appropriately link reports representing records that are corrected by a CAT Reporter for the purposes of correcting data errors not identified in the data validation process;
- Assign a single CAT-Order-ID to all events contained within the lifecycle of an order so that regulators can readily identify all events contained therein; and
- Process and link Manual Order Events with the remainder of the associated order lifecycle.

3.1 Timelines for Reporting

CAT Data for the previous Trading Day must be reported to the Central Repository by 8:00 a.m. Eastern Time on the Trading Day following the day the Industry Member receives such data;

however, the Plan Processor must accept data prior to that deadline, including intra-day submissions.

3.2 Other Items

The Plan Processor must anticipate and manage order data processing over holidays, early market closures and both anticipated and unanticipated market closures. The Plan Processor must allow and enable entities that are not CAT Reporters (e.g., service bureaus) to report on behalf of CAT Reporters only upon being permissioned by the CAT Reporter, and must develop appropriate tools to facilitate this process.

3.3 Required Data Attributes for Order Records Submitted by CAT Reporters

At a minimum, the Plan Processor must be able to receive the data elements as detailed in the CAT NMS Plan.

4. Data Security

4.1 Overview

SEC Rule 613 requires that the Plan Processor ensure the security and confidentiality of all information reported to and maintained by the CAT in accordance with the policies, procedures and standards in the CAT NMS Plan.

The Plan Processor must have appropriate solutions and controls in place to ensure data confidentiality and security during all communication between CAT Reporters and Data Submitters and the Plan Processor, data extraction, manipulation and transformation, loading to and from the Central Repository and data maintenance by the CAT System. The Plan Processor must address security controls for data retrieval and query reports by Participant and the SEC. The solution must provide appropriate tools, logging, auditing and access controls for all components of the CAT System, such as but not limited to access to the Central Repository, access for CAT Reporters, access to rejected data, processing status and CAT Reporter performance and comparison statistics.

The Plan Processor must provide to the Operating Committee a comprehensive security plan that covers all components of the CAT System, including physical assets and personnel, and the training of all persons who have access to the Central Repository consistent with Article VI, Section 6.1(m). The security plan must be updated annually. The security plan must include an overview of the Plan Processor's network security controls, processes and procedures pertaining to the CAT Systems. Details of the security plan must document how the Plan Processor will protect, monitor and patch the environment; assess it for vulnerabilities as part of a managed process, as well as the process for response to security incidents and reporting of such incidents. The security plan must address physical security controls for corporate, data center, and leased facilities where Central Repository data is transmitted or stored. The Plan Processor must have documented "hardening baselines" for systems that will store, process, or transmit CAT Data or PII data.

4.1.1 Connectivity and Data Transfer

The CAT System(s) must have encrypted internet connectivity. CAT Reporters must connect to the CAT infrastructure using secure methods such as private lines or (for smaller broker-dealers) Virtual Private Network connections over public lines. Remote access to the Central Repository must be limited to authorized Plan Processor staff and must use secure multi-factor authentication that meets or exceeds the Federal Financial Institutions Examination Council ("FFIEC") security guidelines surrounding authentication best practices.[268]

The CAT databases must be deployed within the network infrastructure so that they are not directly accessible from external end-user networks. If public cloud infrastructures are used, virtual private networking and firewalls/access control lists or equivalent controls such as private network segments or private tenant segmentation must be used to isolate CAT Data from unauthenticated public access.

4.1.2 Data Encryption

All CAT Data must be encrypted in flight using industry standard best practices (e.g., SSL/TLS). Symmetric key encryption must use a minimum key size of 128 bits or greater (e.g., AES-128), larger keys are preferable. Asymmetric key encryption (e.g., PGP) for exchanging data between Data Submitters and the Central Repository is desirable.

All PII data must be encrypted both at rest and in flight, including archival data storage methods such as tape backup. Storage of unencrypted PII data is not permissible. PII encryption methodology must include a secure documented key management strategy such as the use of HSM(s). The Plan Processor must describe how PII encryption is performed and the key management strategy (e.g., AES-256, 3DES).

CAT Data stored in a public cloud must be encrypted at rest. Non-PII CAT Data stored in a Plan Processor private environment is not required to be encrypted at rest.

If public cloud managed services are used that would inherently have access to the data (e.g., BigQuery, S3, Redshift), then the key management surrounding the encryption of that data must be documented (particularly whether the cloud provider manages the keys, or if the Plan Processor maintains that control). Auditing and real-time monitoring of the service for when cloud provider personnel are able to access/decrypt CAT Data must be documented, as well as a response plan to address instances where unauthorized access to CAT Data is detected. Key management/rotation/revocation strategies and key chain of custody must also be documented in detail.

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[268] Federal Financial Institutions Examination Council, Supplement to Authentication in an Internet Banking Environment (June 22, 2011), *available at* http://www.ffiec.gov/pdf/Auth-ITS-Final%206-22-11%20(FFIEC%20Formated).pdf.

4.1.3 Data Storage and Environment

Data centers housing CAT Systems (whether public or private) must, at a minimum, be SOC 2 certified by an independent third party auditor. The frequency of the audit must be at least once per year.

CAT compute infrastructure may not be commingled with other non-regulatory systems (or tenets, in the case of public cloud infrastructure). Systems hosting the CAT processing for any applications must be segmented from other systems as far as is feasible on a network level (firewalls, security groups, ACL's, VLAN's, authentication proxies/bastion hosts and similar). In the case of systems using inherently shared infrastructure/storage (e.g., public cloud storage services), an encryption/key management/access control strategy that effectively renders the data private must be documented.

The Plan Processor must include penetration testing and an application security code audit by a reputable (and named) third party prior to launch as well as periodically as defined in the SLA(s). Reports of the audit will be provided to the Operating Committee as well as remediation plan for identified issues. The penetration test reviews of the Central Repository's network, firewalls, and development, testing and production systems should help the CAT evaluate the system's security and resiliency in the face of attempted and successful systems intrusions.

4.1.4 Data Access

The Plan Processor must provide an overview of how access to PII and other CAT Data by Plan Processor employees and administrators is restricted. This overview must include items such as, but not limited to, how the Plan Processor will manage access to the systems, internal segmentation, multi-factor authentication, separation of duties, entitlement management, background checks, etc.

The Plan Processor must develop and maintain policies and procedures reasonably designed to prevent, detect, and mitigate the impact of unauthorized access or usage of data in the Central Repository. Such policies and procedures must be approved by the Operating Committee, and should include, at a minimum:

- Information barriers governing access to and usage of data in the Central Repository;
- Monitoring processes to detect unauthorized access to or usage of data in the Central Repository; and
- Escalation procedures in the event that unauthorized access to or usage of data is detected.

A Role Based Access Control ("RBAC") model must be used to permission user with access to different areas of the CAT System. The CAT System must support an arbitrary number of roles with access to different types of CAT Data, down to the attribute level. The administration and management of roles must be documented. Periodic reports detailing the current list of authorized users and the date of their most recent access must be provided to Participants, the SEC and the Operating Committee. The reports of the Participants and the SEC will include only their respective list of users. The Participants and the SEC must provide a response to the report confirming that the list of users is accurate. The required frequency of this report will be defined by the Operating Committee. The Plan Processor must log every instance of access to Central Repository data by users.

Passwords stored in the CAT System must be stored according to industry best practices. Reasonable password complexity rules should be documented and enforced, such as, but not limited to, mandatory periodic password changes and prohibitions on the reuse of the recently used passwords.

Password recovery mechanisms must provide a secure channel for password reset, such as emailing a one-time, time-limited login token to a pre-determined email address associated with that user. Password recovery mechanisms that allow in-place changes or email the actual forgotten password are not permitted.

Any login to the system that is able to access PII data must follow non-PII password rules and must be further secured via multi-factor authentication ("MFA"). The implementation of MFA must be documented by the Plan Processor. MFA authentication capability for all logins (including non-PII) is required to be implemented by the Plan Processor.

4.1.5 Breach Management

The Plan Processor must develop policies and procedures governing its responses to systems or data breaches. Such policies and procedures will include a formal cyber incident response plan, and documentation of all information relevant to breaches.

The cyber incident response plan will provide guidance and direction during security incidents. The plan will be subject to approval by the Operating Committee. The plan may include items such as:

- Guidance on crisis communications;
- Security and forensic procedures;
- Customer notifications;
- "Playbook" or quick reference guides that allow responders quick access to key information;
- Insurance against security breaches;
- Retention of legal counsel with data privacy and protection expertise; and
- Retention of a Public Relations firm to manage media coverage.

Documentation of information relevant to breaches should include:

- A chronological timeline of events from the breach throughout the duration of the investigation;
- Relevant information related to the breach (e.g., date discovered, who made the discovery, and details of the breach);
- Response efforts, involvement of third parties, summary of meetings/conference calls, and communication; and
- The impact of the breach, including an assessment of data accessed during the breach and impact on CAT Reporters.

4.1.6 PII Data Requirements

PII data must not be included in the result set(s) from online or direct query tools, reports or bulk data extraction. Instead, results will display existing non-PII unique identifiers (e.g., Customer-ID or Firm Designated ID). The PII corresponding to these identifiers can be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements. By default, users entitled to query CAT Data are not authorized for PII access. The process by which someone becomes entitled for PII access, and how they then go about accessing PII data, must be documented by the Plan Processor. The chief regulatory officer, or other such designated officer or employee at each Participant and the Commission must, at least annually, review and certify that people with PII access have the appropriate level of access for their role.

Using the RBAC model described above, access to PII data shall be configured at the PII attribute level, following the "least privileged" practice of limiting access as much as possible.

PII data must be stored separately from other CAT Data. It cannot be stored with the transactional CAT Data, and it must not be accessible from public internet connectivity. A full audit trail of PII access (who accessed what data, and when) must be maintained. The Chief Compliance Officer and the Chief Information Security Officer shall have access to daily PII reports that list all users who are entitled for PII access, as well as the audit trail of all PII access that has occurred for the day being reported on.

4.2 Industry Standards

The following industry standards, at a minimum, must be followed as such standards and requirements may be replaced by successor publications, or modified, amended, or supplemented and as approved by the Operating Committee (in the event of a conflict between standards, the more stringent standard shall apply, subject to the approval of the Operating Committee):

- National Institute of Standards and Technology:
    - 800-23 – Guidelines to Federal Organizations on Security Assurance and Acquisition / Use of Test/Evaluated Products
    - 800-53 – Security and Privacy Controls for Federal Information Systems and Organizations

  - 800-115 – Technical Guide to Information Security Testing and Assessment
  - 800-118 – Guide to Enterprise Password Management
  - 800-133 – Recommendation for Cryptographic Key Generation
  - 800-137 – Information Security Continuous Monitoring for Federal Information Systems and Organizations

- Federal Financial Institutions Examination Council:

  - Authentication Best Practices

- International Organization for Standardization:

  - ISO/IEC 27001 – Information Security Management

The Company shall endeavor to join the FS-ISAC and comparable bodies as the Operating Committee may determine. The FS-ISAC provides real time security updates, industry best practices, threat conference calls, xml data feeds and a member contact directory. The FS-ISAC provides the Company with the ability to work with the entire financial industry to collaborate for the purposes of staying up to date with the latest information security activities.

5. BCP / DR Process

5.1 Overview

The Plan Processor must develop and implement disaster recovery ("DR") and business continuity plans ("BCP") that are tailored to the specific requirements of the CAT environment, and which must be approved and regularly reviewed by the Operating Committee. The BCP must address the protection of data, service for the data submissions, processing, data access, support functions and operations. In the context of this document, BCP generally refers to how the business activities will continue in the event of a widespread disruption and the DR requirements refer to how the CAT infrastructure will be designed to support a full data center outage. In addition, the Plan Processor must have SLAs in place to govern redundancy (i.e., no single point of failure) of critical aspects of the CAT System (e.g., electrical feeds, network connectivity, redundant processors, storage units, etc.) and must have an architecture to support and meet the SLA requirements. Any SLAs between the Plan Processor and third parties must be approved by the Operating Committee.

5.2 Industry Standards

The following National Institute of Standards and Technology standards, at a minimum, must be followed in association with Disaster Recovery, in each case as such standards and requirements may be replaced by successor publications, or modified, amended, or supplemented and as approved by the Operating Committee:

- 800-34 – Contingency Planning for Federal Information Systems; and

- Specifically, the following sections as minimum requirements for designing and implementing BCP and DR plans:
    - Chapter 3: Information System Contingency Planning Process, which identifies seven steps to use when developing contingency plans;
    - Chapter 4: Information System Contingency Plan Development, which outlines the key elements of a contingency plan;
    - Chapter 5: Technical Contingency Planning Considerations (using the specific sections applicable to the Plan Processor's systems) which provides considerations specific to different types of technology; and
    - Other sections and the appendices should be taken into consideration as warranted.

In addition, the Plan Processor will need to develop a process to manage and report all breaches.

5.3 Business Continuity Planning

The Plan Processor will design a BCP that supports a continuation of the business activities required of the CAT in the event of a widespread disruption.

With respect to the team supporting CAT business operations, a secondary site must be selected that is capable of housing the critical staff necessary for CAT business operations. The site must be fully equipped to allow for immediate use. The selection of the site must take into account diversity in utility and telecommunications infrastructure as well as the ability for CAT staff to access the site in the event of transit shutdowns, closure of major roadways and other significant disruptions that may affect staff. Planning should consider operational disruption involving significant unavailability of staff.

A bi-annual test of CAT operations where CAT staff operates the facility from the secondary site is required. This will ensure that phone systems, operational tools and other help desk functions all work as expected and the Plan Processor still functions as usual even in the event of a disruption.

CAT operations staff must maintain, and annually test, remote access capabilities to ensure smooth operations during a site un-availability event. Certain critical staff may be required to report directly to the secondary office site. However, an effective telecommuting solution must be in place for all critical CAT operations staff. Furthermore, any telecommuting strategy must require a remote desktop style solution where CAT operations and data consoles remain at the primary data center and must further ensure that CAT Data may not be downloaded to equipment that is not CAT-owned and compliant with CAT security requirements.

The BCP must identify critical third party dependencies. The Plan Processor will coordinate with critical suppliers regarding their arrangements and involve these parties in tests on an annual basis. Critical third party firms may be required to provide evidence of their BCP capabilities and testing.

The Plan Processor must conduct third party risk assessments at regular intervals to verify that security controls implemented are in accordance with NIST SP 800-53. These risk assessments must include assessment scheduling, questionnaire completion and reporting. The Plan Processor should provide assessment reports to the Operating Committee.

The Plan Processor will develop and annually test a detailed crisis management plan to be invoked following certain agreed disruptive circumstances.

The processing sites for business continuity must adhere to the "Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System."[269]

The Plan Processor will conduct an annual Business Continuity Audit using an Independent Auditor approved by the Operating Committee. The Independent Auditor will document all findings in a detailed report provided to the Operating Committee.

5.4 Disaster Recovery Requirements

The Plan Processor will implement a DR capability that will ensure no loss of data and will support the data availability requirements and anticipated volumes of the CAT.

A secondary processing site must be capable of recovery and restoration of services at the secondary site within a minimum of 48 hours, but with the goal of achieving next day recovery after a disaster event. The selection of the secondary site must consider sites with geographic diversity that do not rely on the same utility, telecom and other critical infrastructure services. The processing sites for disaster recovery and business continuity must adhere to the "Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System."

The secondary site must have the same level of availability / capacity / throughput and security (physical and logical) as the primary site. The requirement implies and expects that fully redundant connectivity between the primary and secondary processing sites be established and fully available. Further, given this recovery window, this connectivity must be used to replicate repositories between the primary and secondary sites. Finally, CAT Reporter and Data Submitter submissions must be replicated to the secondary site for possible replay if recent replications are incomplete. Replication must occur as deliveries complete to ensure that a widespread communications failure will have minimal impact to the state of the secondary site.

On an annual basis, the Plan Processor must execute an industry DR test, which must include Plan Participants and a critical mass of non-Plan Participant CAT Reporters and Data Submitters. The tests must be structured such that all CAT Reporters and other Data Submitters can upload to the DR site and the data be ingested by the CAT Data loaders. All DR tests are required to realistically reflect the worst-case scenario.

Failover processes must be transparent to CAT Reporters, as well as failback. In the event of a site failover, CAT Reporters must be able to deliver their daily files without changing configuration. This avoids requiring all CAT Reporters to update configurations, which is an error-prone effort.

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[269] *See* Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System (Apr. 8, 2003), *available at* http://www.sec.gov/news/studies/34-47638.htm.

After a DR event, the primary processing site must be made available as quickly as possible. For short duration DR events, the primary site must be returned to primary within 48 hours after the DR event. Longer duration outages will have differing SLAs. The DR plan must include designs that allow the re-introduction of the primary site or the introduction of a new primary site as the event dictates and an indication of the time required for this re-introduction.

6. Data Availability

6.1 Data Processing

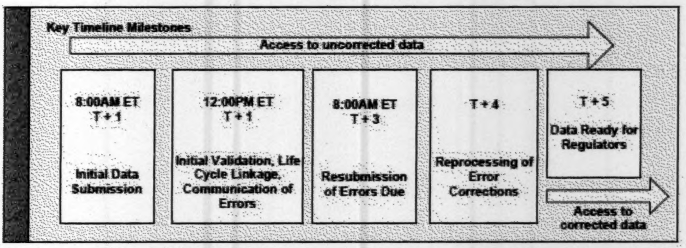
CAT order events must be processed within established timeframes to ensure data can be made available to Participants' regulatory staff and the SEC in a timely manner. The processing timelines start on the day the order event is received by the Central Repository for processing. Most events must be reported to the CAT by 8:00 a.m. Eastern Time the Trading Day after the order event occurred (referred to as transaction date). The processing timeframes below are presented in this context. All events submitted after T+1 (either reported late or submitted later because not all of the information was available) must be processed within these timeframes based on the date they were received.

The Participants require the following timeframes (Figure A) for the identification, communication and correction of errors from the time an order event is received by the processor:

- Noon Eastern Time T+1 (transaction date + one day) – Initial data validation, lifecycle linkages and communication of errors to CAT Reporters;
- 8:00 a.m. Eastern Time T+3 (transaction date + three days) – Resubmission of corrected data; and
- 8:00 a.m. Eastern Time T+5 (transaction date + five days) – Corrected data available to Participant regulatory staff and the SEC.

Late submissions or re-submissions (after 8:00 a.m.) may be considered to be processed that day if it falls within a given time period after the cutoff. This threshold will be determined by the Plan Processor and approved by the Operating Committee. In the event that a significant portion of the data has not been received as monitored by the Plan Processor, the Plan Processor may decide to halt processing pending submission of that data.

Figure A: CAT Central Repository Data Processing Timelines


Key Timeline Milestones
Access to uncorrected data
8:00AM ET
T+1
Initial Data Submission
12:00PM ET
T+1
Initial Validation, Life Cycle Linkage, Communication of Errors
8:00AM ET
T+3
Resubmission of Errors Due
T+4
Reprocessing of Error Corrections
T+5
Data Ready for Regulators
Access to corrected data

6.2 Data Availability Requirements

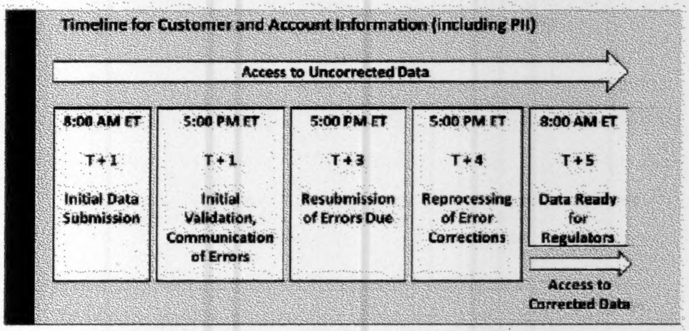
Prior to 12:00 p.m. Eastern Time on T+1, raw unprocessed data that has been ingested by the Plan Processor must be available to Participants' regulatory staff and the SEC.

Between 12:00 p.m. Eastern Time on T+1 and T+5, access to all iterations of processed data must be available to Participants' regulatory staff and the SEC.

The Plan Processor must provide reports and notifications to Participant regulatory staff and the SEC regularly during the five-day process, indicating the completeness of the data and errors. Notice of major errors or missing data must be reported as early in the process as possible. If any data remains un-linked after T+5, it must be available and included with all linked data with an indication that the data was not linked.

If corrections are received after T+5, Participants' regulatory staff and the SEC must be notified and informed as to how re-processing will be completed. The Operating Committee will be involved with decisions on how to re-process the data; however, this does not relieve the Plan Processor of notifying the Participants' regulatory staff and the SEC.

Figure B: Customer and Account Information (Including PII)


Timeline for Customer and Account Information (including PII)
Access to Uncorrected Data
8:00 AM ET
T+1
Initial Data Submission
5:00 PM ET
T+1
Initial Validation, Communication of Errors
5:00 PM ET
T+3
Resubmission of Errors Due
5:00 PM ET
T+4
Reprocessing of Error Corrections
8:00 AM ET
T+5
Data Ready for Regulators
Access to Corrected Data

CAT PII data must be processed within established timeframes to ensure data can be made available to Participants' regulatory staff and the SEC in a timely manner. Industry Members submitting new or modified Customer information must provide it to the Central Repository no later than 8:00 a.m. Eastern Time on T+1. The Central Repository must validate the data and generate error reports no later than 5:00 p.m. Eastern Time on T+3. The Central Repository must process the resubmitted data no later than 5:00 p.m. Eastern Time on T+4. Corrected data must be resubmitted no later than 5:00 p.m. Eastern Time on T+3. The Central Repository must process the resubmitted data no later than 5:00 p.m. Eastern Time on T+4. Corrected data must be available to regulators no later than 8:00 a.m. Eastern Time on T+5.

Customer information that includes PII data must be available to regulators immediately upon receipt of initial data and corrected data, pursuant to security policies for retrieving PII.

7. Receipt of Data from Reporters

7.1 Receipt of Data Transmission

Following receipt of data files submitted by the CAT Reporter or Data Submitter, the Plan Processor must send an acknowledgement of data received to the CAT Reporter and Data Submitter, if applicable. Such acknowledgment will enable CAT Reporters to create an audit trail of their submissions and allow for tracing of data breakdowns when data is not received. At a minimum, the receipt acknowledgement will include:

- SRO-Assigned Market Participant Identifier;
- Date of Receipt;
- Time of Receipt;
- File Identifier; and
- Value signifying the acknowledgement of receipt, but not processing, of the file.

7.2 Data Validation

The Plan Processor will implement data validations at the file and individual record level for data received by the Plan Processor including customer data. If a record does not pass basic validations, such as syntax rejections, then it must be rejected and sent back to the CAT Reporter as soon as possible, so it can repair and resubmit.[270] The required data validations may be amended based on input from the Operating Committee and the Advisory Committee. All identified exceptions will be reported back to the CAT Reporter submitting the data and/or the CAT Reporter on whose behalf the data was submitted.

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[270] If needed – data validation may be a process with an initial validation phase for data errors and a subsequent validation phase later in processing where more time is needed to assess the context of the record in relation to data that may be submitted to the CAT later in the submission window. The Plan Processor must have an additional "matching" process for the purposes of linking together order data passed between CAT Reporters.

The data validations must include the following categories and must be explained in the Technical Specifications document:

- File Validations – Confirmation of file transmission and receipt are in the correct formats. This includes validation of header and trailers on the submitted report, confirmation of a valid SRO-Assigned Market Participant Identifier, and verification of the number of records in the file.
- Validation of CAT Data – Syntax and context checks, including:
  - Format checks:
    - Check that the data is entered in the specified format
  - Data Type checks:
    - Check that the data type of each attribute is as per specification
  - Consistency checks:
    - Check that all attributes for a record of a specified type are consistent
  - Range/logic checks:
    - Range check – Validate that each attribute for every record has a value within specified limits
    - Logic check – Validate that the values provided against each attribute are associated with the event type they represent
  - Data validity checks:
    - Validate that each attribute for every record has an acceptable value
  - Completeness checks:
    - Verify that each mandatory attribute for every record is not null
  - Timeliness checks:
    - Verify that records were submitted within the submission timelines
- Linkage Validation[271] – Process by which related CAT Reportable Events are in a linked daisy chain method

CAT Reporters must have the ability to correct, replace or delete records that have passed initial validations within the CAT.

After the Central Repository has processed the data, the Plan Processor must provide daily statistics, including at a minimum, the following information:

- SRO-Assigned Market Participant Identifier;
- Date of Submission;
- Number of files received;
- Number of files accepted;

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[271] A linkage validation error should only populate for the CAT Reporter that the Plan Processor determines to have broken the link.

- Number of files rejected;
- Number of total order events received;
- Number of order events accepted;
- Number of order events rejected;
- Number of each type of report received;
- Number of each type of report accepted;
- Number of each type of report rejected;
- Number of customer records received;
- Number of total customer records accepted;
- Number of total customer records rejected;
- Number of unknown accounts;
- Number of late submissions;
- Order-IDs rejected;
- Reason(s) for rejection;
- Number of records attempted to be matched;
- Number of records matched; and
- Percentage of records matched.

Individual records contained in files that do not pass the file validation process must not be included for further processing. Once a file passes the initial validation, individual records contained therein may then be processed for further validation. Individual records that do not pass the data validation processes will not be included in the final audit trail but must be retained. Additionally, records not passing the validations will not be included for matching processes.

7.3 Exception Management

The Plan Processor must capture rejected records for each CAT Reporter and make them available to the CAT Reporter. The "rejects" file must be accessible via an electronic file format and the rejections and daily statistics must be available via a web interface. The Plan Processor must provide functionality for CAT Reporters to amend any exceptions.

The Plan Processor must support bulk error correction. Rejected records can be resubmitted as a new file with appropriate indicators to identify the rejection record, which is being repaired. The Plan Processor will then reprocess repaired records.

A GUI must be available for CAT Reporters to make updates to individual records or attributes and must include, at a minimum, the:

- Count of each type of rejection;
- Reason for each rejection;
- Ability to download the rejections;
- Firm assigned order ID of each rejection;
- Details of each rejection;
- Type of report rejected; and
- Repair status.

The Plan Processor must support bulk replacement of records, and reprocess such replaced records. The Plan Processor must provide CAT Reporters with documentation that detail the process how to amend and upload records that fail the validations that are outlined as part of Section 7.4. The Plan Processor must maintain a detailed audit trail capturing corrections to and replacements of records.

The Plan Processor will provide CAT Reporters with their error reports as they become available, and daily statistics will be provided after data has been uploaded and validated by the Plan Processor. The Plan Processor must support a continuous validation and feedback model so that CAT Reporters can identify and correct rejections on an ongoing basis. The rejected reports will include descriptive details, or codes related to descriptive details, as to why each data record was rejected by the Plan Processor.

On a monthly basis, the Plan Processor must produce and publish reports detailing performance and comparison statistics for CAT Reporters,[272] similar to the Report Cards published for OATS presently. This will enable CAT Reporters to assess their performance in relation to their industry peers and help them assess the risk related to their reporting of transmitted data.

Breaks in intermittent lifecycle linkages must not cause the entire lifecycle to break nor cause a reject to the CAT Reporter that correctly reported.

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[272] *See* Appendix C, Error Communication, Correction, and Processing.

7.4 Error Corrections

Error corrections must be able to be submitted and processed at any time, including timeframes after the standard repair window. Additionally, in order to make corrections, CAT Reporters must have access to the Central Repository over weekends.

CAT Reporters must be able to submit error corrections for data errors identified by CAT Reporters that passed format validations.

Additionally, the Plan Processor must:

- Provide feedback as to the reason(s) for errors;
- Prevent a linkage break between reports from resulting in additional events being rejected;
- Allow broken linkages to be repaired without having to submit or resubmit additional reports;
- Allow error corrections to be submitted both via online and bulk uploads or via file submission;
- Support auto-correction of identified errors and notify reporters of any auto-corrections;
- Support group repairs (i.e., the wrong issue symbol affecting multiple reports).

7.5 Data Ingestion

Data submitted to the Central Repository, including rejections and corrections, must be stored in repositories designed to hold information based on the classification of the CAT Reporter (i.e., whether the CAT Reporter is a Participant, a broker-dealer, or a third party Data Submitter). After ingestion by the Central Repository, the Raw Data must be transformed into a format appropriate for data querying and regulatory output.

8. Functionality of the CAT System

8.1 Regulator Access

The Plan Processor must provide Participants' regulatory staff and the SEC with access to all CAT Data for regulatory purposes only. Participants' regulatory staff and the SEC will access CAT Data to perform functions, including economic analyses, market structure analyses, market surveillance, investigations, and examinations.

The CAT must be able to support, at a minimum, 3,000 regulatory users within the system. It is estimated that approximately 20% of all users will use the system on a daily or weekly basis while approximately 10% of all users will require advanced regulator-user access, as described below. Furthermore, it is estimated that there may be approximately 600 concurrent users accessing the CAT at any given point in time. These users must be able to access and use the system without an unacceptable decline in system performance.[273]

As stated in Appendix D, Data Security, the Plan Processor must be able to support an arbitrary number of user roles. Defined roles must include, at a minimum:

- Basic regulator users – Individuals with approved access who plan to use the Central Repository to run basic queries (e.g., pulling all trades in a single stock by a specific party).
- Advanced regulator users – Individuals with approved access who plan to use the Central Repository to construct and run their own complex queries.

Regulators will have access to processed CAT Data through two different methods, an online-targeted query tool and user-defined direct queries and bulk extracts.

8.1.1 Online Targeted Query Tool

The online targeted query tool will provide authorized users with the ability to retrieve processed and/or validated (unlinked) data via an online query screen that includes the ability to choose from a variety of pre-defined selection criteria. Targeted queries must include date(s) and/or time range(s), as well as one or more of a variety of fields, including the following:

- Instrument(s);
- Related instruments (e.g., single stock and all options with for the stock);
- Data type (executions, orders, cancelations, quotes, etc.);
- Product type (equity, option, etc.);
- Processed data, unlinked data or both;
- Listing market;
- Exchange;
- CAT-Reporter-ID(s) – CAT assigned and Participant assigned;
- Customer-ID(s) – CAT assigned and CAT Reporter assigned;
- CAT-Order-ID(s) – CAT assigned and CAT Reporter assigned;
- ISO flag;
- Put/call;

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[273] Specific performance requirements will be included in the SLA.

- Strike price (include ability to select range);
- Size;
- Price;
- Side;
- Short-sale identifier;
- Time-in-force (IOC, GTC, etc.);
- Orders, quotes, BBOs or trades above or below a certain size;
- Orders, quotes, BBOs or trades within a range of prices;
- Canceled orders and/or trades;
- CAT Reporters exceeding specified volume or percentage of volume thresholds in a single instrument or market-wide during a specified period of time;
- CAT Reporter correction rate over time;
- Audit trail of order linkages;
- Corporate action events;
- Instrument history; and
- Others to be defined.

The tool must provide a record count of the result set, the date and time the query request is submitted, and the date and time the result set is provided to the users. In addition, the tool must indicate in the search results whether the retrieved data was linked or unlinked (e.g., using a flag). In addition, the online targeted query tool must not display any PII data. Instead, it will display existing non-PII unique identifiers (e.g., Customer-ID or Firm Designated ID). The PII corresponding to these identifiers can be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements. The Plan Processor must define the maximum number of records that can be viewed in the online tool as well as the maximum number of records that can be downloaded. Users must have the ability to download the results to .csv, .txt, and other formats, as applicable. These files will also need to be available in a compressed format (e.g., .zip, .gz). Result sets that exceed the maximum viewable or download limits must return to users a message informing them of the size of the result set and the option to choose to have the result set returned via an alternate method.

The Plan Processor must define a maximum number of records that the online targeted query tool is able to process. The minimum number of records that the online targeted query tool is able to process is 5,000 (if viewed within the online query tool) or 10,000 (if viewed via a downloadable file).

Once query results are available for download, users are to be given the total file size of the result set and an option to download the results in a single or multiple file(s). Users that select the multiple file option will be required to define the maximum file size of the downloadable files. The application will then provide users with the ability to download the files. This functionality is provided to address limitations of end-user network environment that may occur when downloading large files.

The tool must log submitted queries and parameters used in the query, the user ID of the submitter, the date and time of the submission, as well as the delivery of results. The Plan Processor will use this logged information to provide monthly reports to each Participant and the SEC of its respective metrics on query performance and data usage of the online query tool. The Operating Committee must receive all monthly reports in order to review items, including user usage and system processing performance.

8.1.2 Online Targeted Query Tool Performance Requirements

For targeted search criteria, the minimum acceptable response times will be increments of less than one minute. For the complex queries that either scan large volumes of data (e.g., multiple trade dates) or return large result sets (>1M records), the response time must generally be available within 24 hours of the submission of the request. Regardless of the complexity of the criteria used within the online query tool, any query request for data within one business date of a 12-month period must return results within 3 hours.

Performance requirements listed below apply to data:

- Online targeted query tool searches that include equities and options trade data only in the search criteria must meet minimum requirements, including:
    - Returning results within 1 minute for all trades and related lifecycle events for a specific Customer or CAT Reporter with the ability to filter by security and time range for a specified time window up to and including an entire day;
    - Returning results within 30 minutes for all trades and related lifecycle events for a specific Customer or CAT Reporter in a specified date range (maximum 1 month);
    - Returning results within 6 hours for all trades and related lifecycle events for a specific Customer or CAT Reporter in a specified date range (maximum 12-month duration from the most recent 24 months); and
    - Returning results for the full 6 years of data for all trades and lifecycle events across daily, weekly, and multi-year periods.
- Online targeted query tool searches that include equities and options order and National Best Bid and National Best Offer data in search criteria must meet minimum requirements, including:

- Returning results within 5 minutes for all orders and their complete lifecycles for a single security from a specific Participant across all markets (note: a Participant could have multiple participant identifiers) in a specified time window not to exceed 10 minutes for a single date;
- Returning results within 5 minutes for all orders, cancelations, and the National Best Bid and National Best Offer (or the protected best bid and offer) at the time the order is created for a single security in a specified time window not to exceed 10 minutes for a single date;
- Returning results within 5 minutes for all equity and options orders, cancelations, and executions from a specific market participant in a single underlying instrument in a specified time window not to exceed 10 minutes for a single date;
- Returning results within 5 minutes for all orders, quotes, routes, cancelations and trades (complete life-cycle) for related instruments (e.g., single stock and all options series for the same stock) in a specified time window not to exceed 10 minutes for a single date;
- Returning results within 5 minutes for all orders and quotes entered during a specific time period by a list of specific CAT Reporters, with the ability to drill down to show the complete life-cycle must return results in a specified time window not to exceed 10 minutes for a single date; and
- Returning results within 5 minutes for all orders and quotes entered during a specific time period for a specified list of instruments must return results in a specified time window not to exceed 10 minutes for a single date.

The online targeted query tool architecture must include an automated application-level resource management component. This feature must manage query requests to balance the workload to ensure the response times for targeted and complex queries meet the defined response times. The resource management function will categorize and prioritize query requests based on the input parameters, complexity of the query, and the volume of data to be parsed in the query. Additionally, the source of the query may also be used to prioritize the processing. The Plan Processor must provide details on the prioritization plan of the defined solution for online query requests.

The online targeted query tool must support parallel processing of queries. At a minimum, the online targeted query tool must be able to process up to 300 simultaneous query requests with no performance degradation.

8.1.3 Online Targeted Query Tool Access and Administration

Access to CAT Data is limited to authorized regulatory users from the Participants and the SEC. Authorized regulators from the Participants and the SEC may access all CAT Data, with the exception of PII data. A subset of the authorized regulators from the Participants and the SEC will have permission to access and view PII data. The Plan Processor must work with the Participants and SEC to implement an administrative and authorization process to provide regulator access. The Plan Processor must have procedures and a process in place to verify the list of active users on a regular basis.

A two-factor authentication is required for access to CAT Data. PII data must not be available via the online targeted query tool or the user-defined direct query interface.

8.2 User-Defined Direct Queries and Bulk Extraction of Data

The Central Repository must provide for direct queries, bulk extraction, and download of data for all regulatory users. Both the user-defined direct queries and bulk extracts will be used by regulators to deliver large sets of data that can then be used in internal surveillance or market analysis applications. The data extracts must use common industry formats.

Direct queries must not return or display PII data. Instead, they will return existing non-PII unique identifiers (e.g., Customer-ID or Firm Designated ID). The PII corresponding to these identifiers can be gathered using the PII workflow described in Appendix D, Data Security, PII Data Requirements.

Participants and regulators must have the ability to create, save, and schedule dynamic queries that will run directly against processed and/or unlinked CAT Data. The examples below demonstrate robust usage of the CAT Data to perform a variety of complex query, surveillance, and market analysis use cases. User-defined direct queries will be used to perform tasks such as market reconstruction, behavioral analysis, and cross-market surveillance.

The method(s) for providing this capability is dependent upon the architecture of the CAT and will be defined by the final solution. The CAT cannot be web-based due to the volumes of data that could be extracted.

The Participants are agnostic as to how user-defined direct queries or bulk extracts are implemented as long as the solution provides an open API that allows regulators to use analytic tools (e.g., R, SAS, Python, Tableau) and can use ODBC/JDBC drivers to access the CAT Data. Queries invoked through the open API must be auditable. The CAT System must contain the same level of control, monitoring, logging and reporting as the online targeted query tool. The Plan Processor may define a limited set of basic required fields (e.g., date and at least one other field such as symbol, CAT-Reporter ID, or CAT-Customer-ID) that regulators must use in direct dynamic queries.

The Plan Processor must provide procedures and training to regulators that will use the direct query feature. The Plan Processor may choose to require that user-defined direct query users participate in mandatory training sessions.

The bulk extract feature will replace the current Intermarket Surveillance Group (ISG) ECAT and COATS compliance data files that are currently processed and provided to Participants for use in surveillance applications. These files are used extensively across all Participants in a variety of surveillance applications and are a critical data input to many surveillance algorithms. With the initial implementation of the CAT, opportunities exist to improve the content and depth of information available in these data files. The Plan Processor will need to work with ISG to define new layouts that will include additional data elements that will be available in the CAT Data.

The Plan Processor is responsible for providing data models and data dictionaries for all processed and unlinked CAT Data.

8.2.1 User-Defined Direct Query Performance Requirements

The user-defined direct query tool is a controlled component of the production environment made available to allow the Participants' regulatory staff and the SEC to conduct queries. The user-defined direct query tool must:

- Provide industry standard programmatic interface(s) that allows Participants' regulatory staff and the SEC with the ability to create, save, and run a query;
- Provide query results that are extractable / downloadable and can be used to refine subsequent queries;
- Support complex, multistage queries;
- Run at a minimum 3,000 queries on a daily basis. Of these, it is anticipated that roughly 60% would be simple queries (e.g., pulling of all trades in a given symbol traded during a certain time period) and 40% would be complex (e.g., looking for quotes or orders more than 5% away from the National Best Bid and National Best Offer);
- Process and run approximately 1,800 queries concurrently;
- Support SQL 92 as well as recursive queries with common table expressions (recursive CTEs), bulk load utility, interface for dimension management, windowing functions, JBDC and ODBC, or provide another API with equal or greater query capabilities, so long as ODBC and JDBC are supported. Support for stored procedures and user-defined functions are optional;
- Include data presentation tools / query tools that support query results that produce data sets ranging from less than 1 gigabyte to at least 10 terabytes or more of uncompressed data;
- Provide query owners with the ability to schedule queries;
- Provide query owners with the ability to cancel a query during execution or prior to the scheduled running of a query;
- Provide Participants with a means to view all saved queries owned by the Participants as well as the scheduling of query executions (for queries that have been scheduled);
- Provide an automated delivery method of scheduled query results to the appropriate Participant. Delivery methods must comply with all information security guidelines (encryption, etc.);

- Provide technical expertise to assist regulators with questions and/or functionality about the content and structure of the CAT query capability;
- Include workload balancer to allow prioritization and processing of queries and delivery of results; and
- Support parallel processing of queries. At a minimum, the user-defined direct query tool must be able to process up to 300 simultaneous query requests with no performance degradation.

8.2.2 Bulk Extract Performance Requirements

For bulk extracts of an entire day of data, the minimum acceptable transfer time of equity and options data is four hours. This requirement assumes that there are no limitations within the regulator's own network environment that will prevent the Plan Processor from meeting this requirement.

A consideration was made to require an online Report Center that would include pre-canned reports that could be delivered to regulators or pulled upon request. The reports would be predefined based on requirements developed by Participants and the SEC. Due to the added complexity and the lack of quantifiable use cases, the Participants determined that this was something that may be useful in the future but not at the initial implementation and launch of the CAT. This will be reassessed when broker-dealers begin submitting data to the CAT.

It is envisioned that non-Participant CAT Reporters will be unable to access their data submissions through bulk data exports with the initial implementation of CAT. Only Participants and the SEC will have access to full lifecycle corrected bulk data exports.

Extraction of data must be consistently in line with all permissioning rights granted by the Plan Processor. Data returned must be encrypted, password protected and sent via secure methods of transmission. In addition, PII data must be masked unless users have permission to view the data that has been requested.

The Plan Processor must have an automated mechanism in place to monitor user-defined direct query usage. This monitoring must include automated alerts to notify the Plan Processor of potential issues with bottlenecks or excessively long queues for queries or data extractions. The Plan Processor must provide details as to how the monitoring will be accomplished and the metrics that will be used to trigger alerts.

The user-defined direct query and bulk extraction tool must log submitted queries and parameters used in the query, the user ID of the submitter, the date and time of the submission and the date and time of the delivery of results. The Plan Processor will use this logged information to provide monthly reports to the Operating Committee, Participants and the SEC of their respective usage of the online query tool.

The bulk extract tool must support parallel processing of queries. At a minimum, the bulk extract tool must be able to process up to 300 simultaneous query requests with no performance degradation.

8.3 Identifying Latency and Communicating Latency Warnings to CAT Reporters

The Plan Processor will measure and monitor Latency within the CAT network. Thresholds for acceptable levels of Latency will be identified and presented to the Operating Committee for approval. The Plan Processor will also define policies and procedures for handling and the communication of data feed delays to CAT Reporters, the SEC, and Participants' regulatory staff that occur in the CAT. Any delays will be posted for public consumption, so that CAT Reporters may choose to adjust the submission of their data appropriately, and the Plan Processor will provide approximate timelines for when system processing will be restored to normal operations.

8.4 Technical Operations

The Plan Processor will develop policies, procedures, and tools to monitor and manage the performance of the Central Repository, to be approved by the Operating Committee. Such policies, procedures, and tools will include, at a minimum:

- Monitoring and management of system availability and performance, to include both Online Targeted Query Tool and User-Defined Direct Queries;
- Monitoring and management of query tool usage (e.g., to identify long-running or "stuck" queries); and
- Segregation of query queues by regulator or Participant (i.e., one regulator or Participant's queries should not prevent another regulator or Participant's queries from running).

8.5 System SLAs

Service Level Agreements for system and operational performance will be established for areas, including the following:

- Linkage and order event processing performance;
- Query performance and response times;
- System availability;
- User support/help desk performance;
- Application, network, and data security performance; and
- Development, change management, and implementation processes and timelines.

The actual terms of the SLAs will be negotiated between the Plan Participants and the eventual Plan Processor.

9. CAT Customer and Customer Account Information

9.1 Customer and Customer Account Information Storage

The CAT must capture and store Customer and Customer Account Information in a secure database physically separated from the transactional database. The Plan Processor will maintain information of sufficient detail to uniquely and consistently identify each Customer across all CAT Reporters, and associated accounts from each CAT Reporter. The following attributes, at a minimum, must be captured:

- Social security number (SSN) or Individual Taxpayer Identification Number (ITIN);
- Date of birth;
- Current name;
- Current address;
- Previous name; and
- Previous address.

For legal entities, the CAT must capture the following attributes:

- Legal Entity Identifier (LEI) (if available);
- Tax identifier;
- Full legal name; and
- Address.

The Plan Processor must maintain valid Customer and Customer Account Information for each trading day and provide a method for Participants' regulatory staff and the SEC to easily obtain historical changes to that information (e.g., name changes, address changes, etc.).

The Plan Processor will design and implement a robust data validation process for submitted Firm Designated ID, Customer Account Information and Customer Identifying Information, and must continue to process orders while investigating Customer information mismatches. Validations should:

- Confirm the number of digits on a SSN,
- Confirm date of birth, and

- Accommodate the situation where a single SSN is used by more than one individual.

The Plan Processor will use the Customer information submitted by all broker-dealer CAT Reporters to assign a unique Customer-ID for each Customer. The Customer-ID must be consistent across all broker-dealers that have an account associated with that Customer. This unique CAT-Customer-ID will not be returned to CAT Reporters and will only be used internally by the CAT.

Broker-Dealers will initially submit full account lists for all active accounts to the Plan Processor and subsequently submit updates and changes on a daily basis. In addition, the Plan Processor must have a process to periodically receive full account lists to ensure the completeness and accuracy of the account database. The Central Repository must support account structures that have multiple account owners and associated Customer information (joint accounts, managed accounts, etc.), and must be able to link accounts that move from one CAT Reporter to another (e.g., due to mergers and acquisitions, divestitures, etc.).

9.2 Required Data Attributes for Customer Information Data Submitted by Industry Members

At a minimum, the following Customer information data attributes must be accepted by the Central Repository:

- Account Owner Name;
- Account Owner Mailing Address;
- Account Tax Identifier (SSN, TIN, ITIN);
- Market Identifiers (Larger Trader ID, LEI);
- Type of Account;
- Firm Identifier Number;
    - The number that the CAT Reporter will supply on all orders generated for the Account;
- Prime Broker ID;
- Bank Depository ID; and
- Clearing Broker.

9.3 Customer-ID Tracking

The Plan Processor will assign a CAT-Customer-ID for each unique Customer. The Plan Processor will determine a unique Customer using information such as SSN and DOB for natural persons or entity identifiers for Customers that are not natural persons and will resolve discrepancies. Once a CAT-Customer-ID is assigned, it will be added to each linked (or unlinked) order record for that Customer.

Participants and the SEC must be able to use the unique CAT-Customer-ID to track orders from any Customer or group of Customers, regardless of what brokerage account was used to enter the order.

9.4 Error Resolution for Customer Data

The Plan Processor must design and implement procedures and mechanisms to handle both minor and material inconsistencies in Customer information. The Central Repository needs to be able to accommodate minor data discrepancies such as variations in road name abbreviations in searches. Material inconsistencies such as two different people with the same SSN must be communicated to the submitting CAT Reporters and resolved within the established error correction timeframe as detailed in Section 8.

The Central Repository must have an audit trail showing the resolution of all errors. The audit trail must, at a minimum, include the:

- CAT Reporter submitting the data;
- Initial submission date and time;
- Data in question or the ID of the record in question;
- Reason identified as the source of the issue, such as:
    - duplicate SSN, significantly different Name;
    - duplicate SSN, different DOB;
    - discrepancies in LTID; or
    - others as determined by the Plan Processor;
- Date and time the issue was transmitted to the CAT Reporter, included each time the issue was re-transmitted, if more than once;
- Corrected submission date and time, including each corrected submission if more than one, or the record ID(s) of the corrected data or a flag indicating that the issue was resolved and corrected data was not required; and
- Corrected data, the record ID, or a link to the corrected data.

10. User Support

10.1 CAT Reporter Support

The Plan Processor will provide technical, operational and business support to CAT Reporters for all aspects of reporting. Such support will include, at a minimum:

- Self-help through a web portal;
- Direct support through email and phone;
- Support contact information available through the internet; and
- Direct interface with Industry Members and Data Submitters via industry events and calls, industry group meetings and informational and training sessions.

The Plan Processor must develop tools to allow each CAT Reporter to:

- Monitor its submissions;
- View submitted transactions in a non-bulk format (i.e., non-downloadable) to facilitate error corrections;
- Identify and correct errors;
- Manage Customer and Customer Account Information;
- Monitor its compliance with CAT reporting requirements; and
- Monitor system status.

The Plan Processor will develop and maintain communication protocols (including email messaging) and a secure website to keep CAT Reporters informed as to their current reporting status, as well as issues with the CAT that may impact CAT Reporters' ability to submit or correct data. The website will use user authentication to prevent users for seeing information about firms other than their own, and will contain:

- Daily reporting statistics for each CAT Reporter,[274] including items such as:
    - SRO-Assigned Market Participant Identifier;
    - Date of submission;
    - Number of files received;
    - Number of files accepted;
    - Number of files rejected;
    - Number of total order events received;
    - Number of order events accepted;
    - Number of order events rejected;
    - Number of each type of report received;
    - Number of each type of report accepted;

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[274] Each CAT Reporter or Data Submitter must only be able to view its own data and data it submits on behalf of others.

  - Number of each type of report rejected;
  - Number of total customer records accepted;
  - Number of total customer records rejected;
  - Order-IDs rejected;
  - Reason for rejection;
  - Number of records attempted to be matched;
  - Number of records matched;
  - Percentage of records matched;
  - Number of customer records received;
  - Number of unknown accounts;
  - Latest view of statistics inclusive of re-submissions to get a trade-date view of exceptions and correction statistics available for CAT Reporters to know when everything for a given trade date has been completed; and
  - Most recent CAT Reporter Compliance Report Card, as defined in section 12.4;

- CAT System status, system notifications, system maintenance, and system outages; and
- A mechanism for submitting event data and correcting and resubmitting rejections or inaccurate data.

The Plan Processor will develop and maintain a public website containing comprehensive CAT reporting information, including:

- Technical Specifications;
- Reporting guidance (e.g., FAQs);
- Pending rule changes affecting CAT reporting;
- CAT contact information;
- Availability of test systems;
- Testing plans;
- Proposed changes to the CAT; and
- Fee schedule.

The Plan Processor will develop and maintain a mechanism for assigning CAT Reporter-IDs. A mechanism will also be developed and maintained to change CAT Reporter-IDs should this be necessary (e.g., due to a merger), with the expectations that such changes should be infrequent. Changes to CAT-Reporter-IDs must be reviewed and approved by the Plan Processor.

Initially, non-Participant CAT Reporters will not have access to their data submissions through bulk data exports with the initial implementation of the Central Repository. Only

Participants and the SEC will have access to full lifecycle corrected bulk data exports. Non-Participant CAT Reporters will be able to view their submissions online in a read-only, non-exportable format to facilitate error identification and correction. Data Submitters will be able to export bulk file rejections for repair and error correction purposes.

The Plan Processor will define methods by which it will consult with and inform CAT Reporters and industry groups on updates and changes to user support.

The Plan Processor will define pre- and post-production support programs to minimize the Error Rate and help CAT Reporters to meet their compliance thresholds. Such pre-production support program shall include, but are not limited to, the following activities:

- Educational programs – Includes the following:
    - Publication and industry-wide communication (including FAQs) of the Technical Specifications, including:
        - Appropriate definitions / expected usages for each value in field format
        - All available attribute values for each field
    - Establishment of a dedicated help desk for Reporters to contact;
    - Industry participation in order linkage methodologies;
        - Include information on new order / trade types;
    - Hosting of industry educational calls; and
    - Hosting of industry-wide training.
- Registration – Requires all firms to:
    - Register and be certified as CAT Reporters;
    - Attend industry-wide training;
    - Establish internal controls to capture potential misreporting scenarios; and
    - Work with the Plan Processor to understand scenario-based reporting and expected outputs.
- Communications Plan – A strong communications plan of the timeline to reporting go-live shall:
    - Include communication on how Error Rates and Compliance Thresholds are calculated; and
    - Describe how errors will be communicated back to CAT Reporters.
- Industry-wide testing – Industry-wide test results must be available for all CAT Reporters.

  - As mentioned in Appendix C, Objective Milestones to Assess Progress, appropriate time must be provided between Technical Specification publication and production go-live.
  - Ample testing time must be provided.
  - Appropriate scenario-based testing, including all three validation processes, shall be established.
  - A separate test environment for CAT Reporters that mirrors the production environment shall be provided.

Post-production support program activities shall include, but are not limited to the following:

- Issuing a monthly Report Card on reporting statistics, with information on how reporters stand against similar entities;
- Publishing daily reporting statistics;
- Maintaining Technical Specifications with defined intervals for new releases/updates;
- Posting FAQs and other informational notices to be updated as necessary;
- Hosting of industry educational calls;
- Hosting of industry-wide training;
- Emailing outliers, meaning firms significantly reporting outside of industry standards;
- Conducting annual assessments of dedicated help desk to determine appropriate staffing levels;
- Using the test environment prior to releasing new code to production; and
- Imposing CAT Reporter requirements:
  - Attendance/participation of industry testing sessions;
  - Attendance in industry educational calls; and
  - Attendance in industry-wide training.

10.2 CAT User Support

The Plan Processor will develop a program to provide technical, operational and business support to CAT users, including Participants' regulatory staff and the SEC. The CAT help desk will provide technical expertise to assist regulators with questions and/or functionality about the content and structure of the CAT query capability.

The Plan Processor will develop tools, including an interface, to allow users to monitor the status of their queries and/or reports. Such website will show all in-progress queries/reports, as well as the current status and estimated completion time of each query/report.

The Plan Processor will develop communication protocols to notify regulators of CAT System status, outages and other issues that would affect Participants' regulatory staff and the SEC's ability to access, extract, and use CAT Data. At a minimum, Participants' regulatory staff and the SEC must each have access to a secure website where they can monitor CAT System status, receive and track system notifications, and submit and monitor data requests.

The Plan Processor will develop and maintain documentation and other materials as necessary to train regulators in the use of the Central Repository, including documentation on how to build and run reporting queries.

10.3 CAT Help Desk

The Plan Processor will implement and maintain a help desk to support broker-dealers, third party CAT Reporters, and Participant CAT Reporters (the "CAT Help Desk"). The CAT Help Desk will address business questions and issues, as well as technical and operational questions and issues. The CAT Help Desk will also assist Participants' regulatory staff and the SEC with questions and issues regarding obtaining and using CAT Data for regulatory purposes.

The CAT Help Desk must go live within a mutually agreed upon reasonable timeframe after the Plan Processor is selected, and must be available on a 24x7 basis, support both email and phone communication, and be staffed to handle at minimum 2,500 calls per month. Additionally, the CAT Help Desk must be prepared to support an increased call volume at least for the first few years. The Plan Processor must create and maintain a robust electronic tracking system for the CAT Help Desk that must include call logs, incident tracking, issue resolution escalation.

CAT Help Desk support functions must include:

- Setting up new CAT Reporters, including the assignment of CAT-Reporter-IDs and support prior to submitting data to CAT;
- Managing CAT Reporter authentication and entitlements;
- Managing CAT Reporter and third party Data Submitters testing and certification;
- Managing Participants and SEC authentication and entitlements;
- Supporting CAT Reporters with data submissions and data corrections, including submission of Customer and Customer Account Information;
- Coordinating and supporting system testing for CAT Reporters;
- Responding to questions from CAT Reporters about all aspects of CAT reporting, including reporting requirements, technical data transmission questions, potential changes to SEC Rule 613 that may affect the CAT, software/hardware updates and

upgrades, entitlements, reporting relationships, and questions about the secure and public websites;

- Responding to questions from Participants' regulatory staff and the SEC about obtaining and using CAT Data for regulatory purposes, including the building and running of queries; and
- Responding to administrative issues from CAT Reporters, such as billing.

10.4 CAT Reporter Compliance

The Plan Processor must include a comprehensive compliance program to monitor CAT Reporters' adherence to SEC Rule 613. The Chief Compliance Officer will oversee this compliance program, and will have responsibility for reporting on compliance by CAT Reporters to the Participants. The compliance program covers all CAT Reporters, including broker-dealers and Participants.

As a fundamental component of this program, the Plan Processor will identify on a daily basis all CAT Reporters exceeding the maximum allowable Error Rate established by the Participants. The Error Rate will initially be set by the CAT NMS Plan, and will be reviewed and adjusted on an ongoing basis by the Operating Committee. Error Rates will be based on timeliness, correctness, and linkages.

The Plan Processor will, on an ongoing basis, analyze reporting statistics and Error Rates and recommend to Participants proposed changes to the maximum allowable Error Rates established by the Participants. All CAT Reporters exceeding this threshold will be notified that they have exceeded the maximum allowable Error Rate and will be informed of the specific reporting requirements that they did not fully meet (e.g., timeliness or rejections).

The Plan Processor will develop and publish CAT Reporter compliance report cards on a periodic basis to assist CAT Reporters in monitoring overall compliance with CAT reporting requirements. The Plan Processor will also recommend criteria and processes by which CAT Reporters will be fined for inaccurate, incomplete, or late submissions. The compliance report cards will include the following information:

- Number of inaccurate transactions submitted;
- Number of incomplete transactions submitted; and
- Number of transactions submitted later than reporting deadlines.

The CAT Reporter compliance program will include reviews to identify CAT Reporters that may have failed to submit order events to the CAT, as well as to ensure CAT Reporters correct all identified errors even if such errors do not exceed the maximum allowable Compliance Threshold.

The Plan Processor will, on a monthly basis, produce and provide reports containing performance and comparison statistics as needed to each Participant on its members' CAT reporting compliance thresholds so that Participants can monitor their members' compliance with CAT reporting requirements and initiate disciplinary action when appropriate. The Plan Processor will also produce and provide, upon request from the Participants and the SEC, reports containing performance and comparison statistics as needed on each CAT Reporter's compliance thresholds so that the Participants or the SEC may take appropriate action if a Participant fails to comply with its CAT reporting obligations.

The Plan Processor will produce and make available on a monthly basis reports for all CAT Reporters, benchmarking their performance and comparison statistics against similar peers. The reports will be anonymized such that it will not be possible to determine the members of the peer group to which the CAT Reporter was compared.

The Plan Processor will produce and make available to regulators on a monthly basis a report detailing Error Rates, transaction volumes, and other metrics as needed to allow regulators to oversee the quality and integrity of CAT Reporter reporting to the Central Repository.

11. Upgrade Process and Development of New Functionality

11.1 CAT Functional Changes

The Plan Processor must propose a process governing the determination to develop new functionality, which process must be reviewed and approved by the Operating Committee. The process must, at a minimum:

- Contain a mechanism by which changes can be suggested to the Operating Committee by Advisory Committee members, the Participants, or the SEC;
- Contain a defined process for developing impact assessments, including implementation timelines, for proposed changes; and
- Contain a mechanism by which functional changes which the Plan Processor wishes to undertake can be reviewed and approved by the Operating Committee.

The Plan Processor shall not unreasonably withhold, condition, or delay implementation of any changes or modifications reasonably requested by the Operating Committee.

11.2 CAT Infrastructure Changes

The Plan Processor must implement a process to govern changes to CAT. This process must contain provisions for:

- Business-as-usual changes (e.g., replacing failed hardware, adding capacity to deal with expected increases in transaction volumes) that would require the Plan Processor to provide the Operating Committee with a summary report (e.g., infrastructure changes, acquired costs, etc.); and
- Isolated infrastructure changes (e.g., moving components of the system from a self-hosted to an Infrastructure-as-a-Service provider) that would require the Plan

Processor to provide a request to the Operating Committee for review and approval before commencing any actions.

11.3 Testing of New Changes

The Plan Processor must implement a process governing user testing of changes to CAT functionality and infrastructure, which process must be reviewed and approved by the Operating Committee. The process must:

- Define the process by which changes are to be tested by CAT Reporters and regulators;
- Define the criteria by which changes will be approved prior to their deployment into the production environment(s); and
- Define the environment(s) to be used for user testing.

[FR Doc. 2016–10461 Filed 5–16–16; 8:45 am]

BILLING CODE 8011–01–P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
1985

FEDERAL REGISTER

Vol. 81 Tuesday,
No. 95 May 17, 2016

Part III

Equal Employment Opportunity Commission

29 CFR Parts 1630 and 1635
Regulations Under the Americans With Disabilities Act; Genetic Information Nondiscrimination Act

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

29 CFR Part 1630

RIN 3046–AB01

Regulations Under the Americans With Disabilities Act

AGENCY: Equal Employment Opportunity Commission.

ACTION: Final rule.

SUMMARY: The Equal Employment Opportunity Commission (EEOC or Commission) is issuing its final rule to amend the regulations and interpretive guidance implementing Title I of the Americans with Disabilities Act (ADA) to provide guidance on the extent to which employers may use incentives to encourage employees to participate in wellness programs that ask them to respond to disability-related inquiries and/or undergo medical examinations. This rule applies to all wellness programs that include disability-related inquiries and/or medical examinations whether they are offered only to employees enrolled in an employer-sponsored group health plan, offered to all employees regardless of whether they are enrolled in such a plan, or offered as a benefit of employment by employers that do not sponsor a group health plan or group health insurance. Published elsewhere in this issue of the **Federal Register**, the EEOC also issued a final rule to amend the regulations implementing Title II of the Genetic Information Nondiscrimination Act (GINA) that addresses the extent to which employers may offer incentives for an employee's spouse to participate in a wellness program.

DATES: *Effective date:* This rule is effective July 18, 2016.

Applicability date: This rule is applicable beginning on January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Christopher J. Kuczynski, Assistant Legal Counsel, (202) 663–4665, or Joyce Walker-Jones, Senior Attorney Advisor, (202) 663–7031, or (202) 663–7026 (TTY), Office of Legal Counsel, U.S. Equal Employment Opportunity Commission. (These are not toll free numbers.) Requests for this rule in an alternative format should be made to the Office of Communications and Legislative Affairs, (202) 663–4191 (voice) or (202) 663–4494 (TTY). (These are not toll free numbers.)

SUPPLEMENTARY INFORMATION:

Introduction

This rule applies to wellness programs that are considered "employee health programs" under Title I of the ADA.[1] It does not apply to programs that may be provided by entities other than those subject to Title I, such as social service agencies covered under Title II of the ADA,[2] or places of public accommodation subject to Title III of the ADA,[3] that may provide similar programs to individuals who are considered volunteers.

A wellness program that is an employee health program may be part of a group health plan or may be offered outside of a group health plan or group health insurance coverage.[4] All of the provisions in this rule, including the requirement to provide a notice and limitations on incentives, apply to all employee health programs that ask employees to respond to disability-related inquiries and/or undergo medical examinations. Wellness programs that do not include disability-related inquiries or medical examinations (such as those that provide general health and educational information) are not subject to this final rule, although such programs must be available to all employees and must provide reasonable accommodations to employees with disabilities.

Discussion

Many employers that sponsor group health plans also offer health promotion and disease prevention activities, known as wellness programs, to employees enrolled in a health plan.[5] Some employers, however, offer wellness programs that are available to all employees whether or not they are enrolled in an employer-sponsored health plan, while other employers do not offer a group health plan or group health insurance coverage but offer some type of workplace wellness program. Many of these programs obtain medical information from employees by asking them to complete a health risk assessment (HRA) and/or undergo biometric screenings for risk factors (such as high blood pressure or cholesterol). Other wellness programs provide educational health-related information or programs that may include: nutrition classes, weight loss and smoking cessation programs, onsite exercise facilities, and/or coaching to help employees meet health goals.

Some employers offer incentives to encourage employees simply to participate in a wellness program, while others offer incentives based on whether employees achieve certain health outcomes.[6] Incentives can be framed as rewards or penalties and often take the form of prizes, cash, or a reduction or increase in health care premiums or cost sharing.

Applicable Federal Laws

Several federal laws govern wellness programs offered by employers. Wellness programs must comply with Title I of the ADA, Title II of GINA,[7] and other employment discrimination laws enforced by the EEOC. Wellness programs that are part of or provided by a group health plan or by a health insurance issuer offering group health insurance in connection with a group health plan also must comply with the nondiscrimination provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended by the Affordable Care Act, which is enforced by the Department of Labor (DOL), Department of the Treasury (Treasury), and Department of Health and Human Services (HHS), referred to collectively as "the tri-Departments." [8] A wellness program that is part of a group health plan also must comply with HIPAA's Privacy, Security, and Breach notification requirements discussed later in this preamble.

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[1] 42 U.S.C. 12101–12117.

[2] 42 U.S.C. 12131–12134.

[3] 42 U.S.C. 12181–12189.

[4] The term "group health plan," which includes both insured and self-insured group health plans, as defined in the Employee Retirement Income Security Act (ERISA) section 733(a), is an "employee welfare benefit plan" to the extent that the plan provides medical care to employees and their dependents directly or through insurance, reimbursement, or otherwise. An employer may establish or maintain more than one group health plan. ERISA section 3(1) defines an "employee welfare benefit plan" as "any plan, fund, or program . . . established or maintained by an employer or by an employee organization, or by both, to the extent that such plan, fund, or program was established or is maintained for the purpose of providing for its participants or their beneficiaries . . . medical, surgical, or hospital care or benefits, or benefits in the event of sickness, accident, disability, death or unemployment . . . ."

[5] An annual survey conducted by the Kaiser Family Foundation Health Research and Educational Trust indicated that 55 percent of large firms that offered wellness programs said that most of their wellness benefits were provided by the group health plan. *See* Karen Pollitz & Matthew Rae, Kaiser Family Foundation, *Workplace Wellness Programs Characteristics and Requirements* 5 (2016), *https://kaiserfamilyfoundation.files.wordpress.com/2016/01/8742-02-workplace-wellness-programs-characteristics-and-requirements.pdf.*

[6] *See* RAND Health, *Workplace Programs Study: Final Report* xx (2013), *http://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR254/RAND_RR254.pdf* [hereinafter *RAND Final Report*]. The study found that 69 percent of employers with at least 50 employees offer financial incentives to encourage employee participation, while 10 percent offer incentives tied to health outcomes. By contrast, a survey conducted by the Kaiser Foundation found that 36 percent of large employers with 200 or more employees and 18 percent of smaller employers offer financial incentives to participate in a wellness program. *See Employer Health Benefits Survey,* Kaiser Family Foundation (2014), *http://kff.org/health-costs/report/2014-employer-health-benefits-survey/* [hereinafter *Kaiser Survey*].

[7] 42 U.S.C. 2000ff–2000ff–11.

[8] The Patient Protection and Affordable Care Act, Pub. L. 111–148, 124 Stat. 119 (2010) (codified as

Title I of the ADA and Other Laws Prohibiting Employment Discrimination

Title I of the ADA prohibits discrimination against individuals on the basis of disability in regard to employment compensation and other terms, conditions, and privileges of employment, including "fringe benefits available by virtue of employment, whether or not administered by the covered entity." [9] The ADA also restricts the medical information employers may obtain from employees by generally prohibiting them from making disability-related inquiries or requiring medical examinations.[10] The statute, however, provides an exception to this rule for voluntary employee health programs, which include many workplace wellness programs.[11] Additionally, the ADA requires employers to provide reasonable accommodations (modifications or adjustments) to enable individuals with disabilities to have equal access to fringe benefits, such as general health and educational wellness programs, offered to individuals without disabilities.[12] Employers also must comply with other laws the EEOC enforces that prohibit discrimination based on race, color, national origin, sex (including pregnancy, gender identity, transgender status, and sexual orientation), religion, compensation, age, or genetic information.[13]

HIPAA's Nondiscrimination Provisions

HIPAA's nondiscrimination provisions, as amended by the Affordable Care Act, generally prohibit group health plans and health insurance issuers providing group health insurance in connection with a group health plan from discriminating against participants and beneficiaries in premiums, benefits, or eligibility based on a health factor.[14] An exception to the general rule allows premium discounts, or rebates or modification to otherwise applicable cost sharing (including copayments, deductibles, or coinsurance), in return for adherence to certain programs of health promotion and disease prevention.[15]

The 2013 final tri-Department regulations to implement HIPAA's nondiscrimination provisions discuss two types of wellness programs: "participatory" and "health contingent." [16] Participatory wellness programs either do not provide a reward or do not include any condition for obtaining a reward that is based on an individual satisfying a standard related to a health factor. Examples of participatory wellness programs include programs that ask employees only to complete a HRA or attend a smoking cessation program. The tri-Department regulations do not impose any incentive limits on "participatory" wellness programs and state that they are permissible as long as they are made available to all similarly situated individuals.

Health-contingent wellness programs, which may be either activity-only or outcome-based, require individuals to satisfy a standard related to a health factor to obtain a reward. Examples of health-contingent wellness programs include a program that requires employees to walk or do a certain amount of exercise weekly (an activity-based program) or to reduce their blood pressure or cholesterol level (an outcome-based program) in order to earn an incentive. Incentives offered in connection with health-contingent wellness programs generally must not

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amended in scattered sections of 25 U.S.C., 26 U.S.C., 29 U.S.C., and 42 U.S.C.), and the Health Care and Education Reconciliation Act of 2010, Pub. L. 111–152, 124 Stat. 1029 (codified at 42 U.S.C. 18121, 18043; 26 U.S.C. 1411, 4191; 20 U.S.C. 1087i–2), are known collectively as "the Affordable Care Act." Section 1201 of the Affordable Care Act amended and moved the nondiscrimination and wellness provisions of the Public Health Service (PHS) Act from section 2702 to section 2705, and extended the nondiscrimination provisions to the individual health insurance market. The Affordable Care Act also added section 715(a)(1) to ERISA and section 9815(a)(1) to the Internal Revenue Code (Code) to incorporate the provisions of part A of title XXVII of the PHS Act, including PHS Act section 2705, making them applicable to group health plans and group health insurance issuers.

[9] 42 U.S.C. 12112(a); 29 CFR 1630.4(a)(1)(vi). Title I of the ADA applies to, in addition to employers, covered entities including employment agencies, labor organizations, and joint-labor management committees. *See* 42 U.S.C. 12111(2), (4), (5), 12112(b) (describing the prohibited practices of each of these entities); *see also* 29 CFR 1630.2(b) (giving the definition of covered entity), 1630.4(a)(1) (describing prohibited practices). Although employers generally will be the ADA covered entities that offer wellness programs, this preamble, the final rule, and the interpretive guidance frequently use the term "covered entity," as that term appears throughout EEOC's entire ADA regulation.

[10] 42 U.S.C. 12112(d)(4)(A) (stating that a covered entity "shall not require a medical examination and shall not make inquiries of an employee as to whether such employee is an individual with a disability or as to the nature or severity of the disability, unless such examination or inquiry is shown to be job-related and consistent with business necessity"). The EEOC refers to the types of inquiries prohibited by the ADA as "disability-related inquiries" and has issued guidance on what constitutes such an inquiry. *See EEOC Enforcement Guidance on Disability-Related Inquiries and Medical Examinations of Employees Under the Americans with Disabilities Act,* Question 1 (2000), *http://www.eeoc.gov/policy/docs/guidance-inquiries.html* [hereafter *Guidance*].

[11] 42 U.S.C. 12112(d)(4)(B). A covered entity may conduct voluntary medical examinations, including voluntary medical histories, that are part of an employee health program available to employees at that work site.

[12] 42 U.S.C. 12112(b)(5)(A); 29 CFR 1630.9 (prohibiting covered entity from failing to provide reasonable accommodations absent undue hardship); 29 CFR 1630.2(o)(1)(iii) (providing that reasonable accommodation includes modifications and adjustments that enable a covered entity's employees to enjoy "equal benefits and privileges of employment").

[13] *See* Title VII of the Civil Rights Act of 1964 (Title VII), 42 U.S.C. 2000e–2000e–17; the Equal Pay Act of 1963, 29 U.S.C. 206(d); the Age Discrimination in Employment Act of 1967 (ADEA), 29 U.S.C. 621–634; and Title II of GINA. However, this rule concerns only the application of the ADA's rules limiting disability-related inquiries and medical examinations of employees to employer-sponsored wellness programs. Compliance with the limits on incentives in this rule does not necessarily result in compliance with other nondiscrimination laws or other parts of the ADA. For example, as the interpretive guidance explains, even if an employer's wellness program complies with the incentive limits set forth in the ADA regulations, the employer violates Title VII or the ADEA if that program discriminates on the basis of race, color, national origin, sex (including pregnancy, gender identity, transgender status, and sexual orientation), religion, or age.

[14] The nondiscrimination provisions originally enacted in HIPAA set forth eight health status-related factors, which the December 13, 2006, final regulations refer to as "health factors." 71 FR 75014 (Dec. 13, 2006). Under HIPAA and the 2006 regulations, as well as under PHS Act section 2705 (as added by the Affordable Care Act), the eight health factors are: health status, medical condition (including both physical and mental illnesses), claims experience, receipt of health care, medical history, genetic information, evidence of insurability (including conditions arising out of acts of domestic violence), and disability.

[15] Prior to the enactment of the Affordable Care Act, HIPAA added section 9802 of the Code, section 702 of ERISA, and section 2702 of the PHS Act. DOL, Treasury, and HHS issued joint final regulations in 2006 regarding wellness programs in connection with a group health plan or group health insurance coverage under which any of the conditions for obtaining a reward are based on satisfying a standard related to a health factor. *See* 26 CFR 54.9802–1(f); 29 CFR 2590.702(f); 45 CFR 146.121(f). Paragraph (f)(2) of the 2006 regulations limited the total reward for such wellness programs to 20 percent of the total cost of coverage under the plan. The Affordable Care Act amended the PHS Act to raise the limitation on incentives to 30 percent of the total cost of coverage under the plan. *See* PHS Act section 2705(j)(3)(A). The tri-Departments issued final regulations in June 2013 to implement PHS Act section 2705 and amend the 2006 HIPAA regulations regarding nondiscriminatory wellness programs in group health coverage. Incentives for Nondiscriminatory Wellness Programs in Group Health Plans, 78 FR 33158 (June 3, 2013) (codified at 26 CFR 54.9802–1; 29 CFR 2590.702; 45 CFR 46.121). Under the 2013 final regulations on nondiscriminatory wellness programs, references to "a plan providing a reward" include both providing a reward (such as a discount or rebate of a premium or contribution, a waiver of all or part of a cost-sharing mechanism, an additional benefit, or any financial or other incentive) and imposing a penalty (such as a surcharge or other financial or nonfinancial disincentive)."

[16] *See* 26 CFR 54.9802–1(f); 29 CFR 2590.702(f); 45 CFR 146.121(f).

exceed 30 percent of the total cost of self-only health coverage where only an employee, not the employee's dependents, is eligible for the wellness program.[17] There are five requirements for health-contingent wellness programs under PHS Act section 2705 and the 2013 final regulations. Generally, health-contingent wellness programs must be available to all similarly situated individuals and must: (1) Give eligible individuals an opportunity to qualify for a reward at least once per year; (2) limit the size of the reward to no more than 30 percent of the total cost of coverage (or, 50 percent to the extent that the wellness program is designed to prevent or reduce tobacco use): (3) provide a reasonable alternative standard (or waiver) to qualify for a reward; (4) be reasonably designed to promote health or prevent disease and not be overly burdensome; and, (5) disclose the availability of a reasonable alternative standard to qualify for the reward in plan materials that provide details regarding the wellness program.[18]

Finally, the 2013 final regulations recognize that compliance with HIPAA's nondiscrimination rules (as amended by the Affordable Care Act), including the wellness program requirements, is not determinative of compliance with any other provision of any other state or federal law, including, but not limited to, the ADA, Title VII, and GINA.[19]

Background on the Notice of Proposed Rulemaking on the ADA and Wellness Programs

The Commission drafted a Notice of Proposed Rulemaking (NPRM) that was circulated to the Office of Management and Budget for review (pursuant to Executive Order 12866) and to federal executive branch agencies for comment (pursuant to Executive Order 12067).[20] The NPRM was then published in the **Federal Register** on April 20, 2015, for a 60-day public comment period.[21]

The NPRM re-asserted the Commission's position that, as required by the ADA, employee health programs that include disability-related inquiries or medical examinations (including inquiries or medical examinations that are part of a HRA or medical history) must be "voluntary," and defined what that term meant in light of the amendments made to HIPAA by the Affordable Care Act. The NPRM sought comment on wellness programs in general and on any of the proposed revisions to the ADA regulations and interpretative guidance at § 1630.14, which:

—Explained that an "employee health program" must be "reasonably designed to promote health or prevent disease" and must not be "overly burdensome, a subterfuge for violating the ADA or other laws prohibiting employment discrimination, or highly suspect in the method chosen to promote health or prevent disease";

—Defined the term "voluntary" and explained that in order for participation in an employee health program to be voluntary, a covered entity may not require employees to participate, deny access to health coverage for nonparticipation, generally limit coverage under its health plans, take any other adverse action, or retaliate, interfere with, coerce, intimidate, or threaten an employee who does not participate or fails to achieve certain health outcomes, and must provide a notice clearly explaining what medical information will be obtained, how it will be used, who will receive it, and the restrictions on disclosure;

—Clarified that an employer may offer incentives up to a maximum of 30 percent of the total cost of self-only coverage to promote an employee's participation in a wellness program that includes disability-related inquiries or medical examinations (including a blood test to detect the presence of nicotine as part of a smoking cessation program), and that this limit applies whether the program is participatory only, health contingent, or a program that includes both participatory and health-contingent components;

—Explained the requirements concerning the confidentiality of medical information obtained as part of voluntary employee health programs and added a new paragraph that provided that a covered entity only may receive information collected by a wellness program in aggregate form that does not disclose, and is not reasonably likely to disclose, the identity of specific individuals except as necessary to administer the plan; and

—Clarified that compliance with the rules governing voluntary employee health programs, including the limits on financial incentives applicable under the ADA, does not ensure compliance with all of the antidiscrimination laws the EEOC enforces.

The NPRM also explained that the references to the requirement to provide a notice and the limitations on incentives in the proposed rule, and the changes to the corresponding section of the interpretive guidance, apply only to wellness programs that are part of or provided by a group health plan or by a health insurance issuer offering health insurance in connection with a group health plan. The proposed rule asked for comments on whether employers offer or are likely to offer wellness programs outside of a group health plan or group health insurance coverage and whether the Commission should issue regulations specifically limiting incentives provided as part of such programs.

Additionally, the Commission specifically sought comments on several other issues, including:

—Whether to be "voluntary" under the ADA, entities that offer incentives to encourage employees to disclose medical information also must offer similar incentives to persons who choose not to disclose such information but who, instead, provide certification from a medical professional stating that the employee is under the care of a physician;

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[17] Under the tri-Department wellness regulations implementing section 2705 of the PHS Act (as amended by the Affordable Care Act), the applicable percentage is increased to 50 percent to the extent that the additional percentage is in connection with a program designed to prevent or reduce tobacco use. *See* 26 CFR 54.9802–1(f)(5); 29 CFR 2590.702(f)(5); 45 CFR 146.121(f)(3).

[18] Although the five requirements for health-contingent programs generally are the same for activity-only wellness programs and outcome–based wellness programs under the tri-Department regulations, there are some differences. For the requirements applicable to activity-only programs, see 26 CFR 54.9802–1(f)(3), 29 CFR 2590.702(f)(3), and 45 CFR 146.121(f)(3). For requirements applicable to outcome–based programs, see 26 CFR 54.9802–1(f)(4), 29 CFR 2590.702(f)(4), and 45 CFR 146.121(f)(4).

[19] *See* Incentives for Nondiscriminatory Wellness Programs in Group Health Plans, 78 FR at 33168 ("The Departments recognize that many other laws may regulate plans and issuers in their provision of benefits to participants and beneficiaries. These laws include, but are not limited to, the ADA, Title VII of the Civil Rights Act of 1964, Code section 105(h) and PHS Act section 2716 (prohibiting discrimination in favor of highly compensated individuals), the Genetic Information Nondiscrimination Act of 2008, the Family and Medical Leave Act, ERISA's fiduciary provisions, and State law."). A publication jointly issued by the tri-Departments also explains that the fact that a wellness program complies with the tri-Department wellness program regulations does not necessarily mean it complies with any other provision of the PHS Act, the Code, ERISA (including the Consolidated Omnibus Budget Reconciliation Act (COBRA) continuation provisions), or any other state or federal law, such as the ADA or the privacy and security obligations of HIPAA. Similarly, the fact that a wellness program meets the requirements of the ADA is not determinative of compliance with the PHS Act, ERISA, or the Code. *See* DOL—Employee Benefits Security Administration, *FAQs About Affordable Care Act Implementation (Part XXV), http://www.dol.gov/ebsa/faqs/faq-aca25.html.*

[20] While there are differences between the definitions and requirements for wellness programs set forth in the Affordable Care Act, PHS Act, ERISA, the Code, and Title II of GINA, this final rule is being issued after review by and consultation with the tri-Departments.

[21] Amendments to Regulations Under the Americans With Disabilities Act, 80 FR 21659 (proposed April 20, 2015)(to be codified at 29 CFR part 1630).

—Whether to be considered "voluntary" under the ADA, the incentives provided in a wellness program that asks employees to respond to disability-related inquiries and/or undergo medical examinations may not be so large as to render health insurance coverage unaffordable under the Affordable Care Act[22] and, therefore, in effect coercive for an employee;

—Whether employees participating in wellness programs that include disability-related inquiries and/or medical examinations, and that are part of a group health plan, should be required to provide prior, written, and knowing authorization that their participation is voluntary and whether there are existing forms that could provide adequate protection;

—Whether the proposed notice requirement should apply only to wellness programs that offer more than de minimis rewards or penalties to employees who participate (or decline to participate) in wellness programs that ask them to respond to disability-related inquiries and/or undergo medical examinations; and

—Whether the proposed rule's 30 percent limit on incentives offered with respect to wellness programs that ask employees to respond to disability-related inquiries and/or undergo medical examinations would have any impact on programs intended to prevent or reduce tobacco use.

Summary of Revisions and Response to Comments

During the 60-day comment period, the Commission received nearly 2,750 public comments on the NPRM from a wide spectrum of stakeholders, including, among others: Individuals, including individuals with disabilities and those who are considered overweight or have eating disorders; disability rights and other advocacy organizations and their members; civil rights groups; federal and state government employees and representatives, including a joint letter from members of Congress; employer associations and industry groups and law firms on their behalf; and health insurance issuers and associations representing them, third party administrators, and wellness vendors (referred to as "health care groups"). The comments from individuals included 2,410 similar, but not uniform, letters—almost all of which were submitted by a national organization that supports women and families—urging the Commission to address HRAs that ask women whether they are pregnant or plan on becoming pregnant. Most of the comments (2,723) were submitted through the United States Government's electronic docket system, *Regulations.gov*. The remaining 25 comments (a few of which also were submitted through *Regulations.gov*) were mailed or faxed to the Executive Secretariat. Additionally, members of the Commission met or had telephone conversations with several stakeholder groups, a number of which also submitted written comments.

The Commission has reviewed and considered each of the comments in preparing this final rule. The first section of this preamble addresses general comments concerning the Commission's interpretation of the interaction between the ADA and HIPAA's wellness program provisions, the final rule's applicability date, and the ADA's "safe harbor" provision.

The second section discusses comments submitted in response to questions the NPRM asked about several issues, as noted above.

Finally, because three of the questions asked in the NPRM directly relate to the provisions regarding the notice requirement and the limitations on incentives, the preamble addresses those comments in the last section that discusses comments regarding specific provisions.

General Comments

Interaction Between the ADA and HIPAA's Wellness Program Provisions

The Commission received a number of comments expressing support for, and concerns about, wellness programs. For example, while many commenters stated that properly designed wellness programs have the potential to help employees become healthier and bring down health care costs, they believe that these programs also carry serious potential to discriminate in ways long prohibited by the civil rights laws by allowing employers to coerce employees into providing medical information. Disability rights and advocacy groups expressed concerns that the EEOC was abandoning its prior position that a voluntary wellness program that includes disability-related inquiries and/or medical examinations cannot involve penalties, while employer and industry groups commented that the proposed rule's limitation on incentives is inconsistent with the tri-Department rules.

Although the Commission recognizes that compliance with the standards in HIPAA, as amended by the Affordable Care Act, is not determinative of compliance with the ADA, we believe that the final rule interprets the ADA in a manner that reflects the ADA's goal of limiting employer access to medical information and is consistent with HIPAA's provisions promoting wellness programs. Accordingly, after consideration of all of the comments, the Commission reaffirms its conclusion that allowing certain incentives related to wellness programs, while limiting them to prevent economic coercion that could render provision of medical information involuntary, is the best way to effectuate the purposes of the wellness program provisions of both laws.

Applicability Date

Employer associations and industry groups also submitted comments regarding the effective date of the final rule, recommending that it allow enough time for employers to bring their wellness programs into compliance, that it be issued jointly with the GINA wellness rule, and that it not be applied retroactively. The Commission agrees and concludes that the provisions of this rule set forth at § 1630.14(d)(2)(iv) (concerning notice) and § 1630.14(d)(3) (concerning incentives) will apply only prospectively to employer wellness programs as of the first day of the first plan year that begins on or after January 1, 2017, for the health plan used to determine the level of incentive permitted under this regulation. So, for example, if the plan year for the health plan used to calculate the permissible incentive limit begins on January 1, 2017, that is the date on which the provisions of this rule governing incentives apply to the wellness program. If the plan year of the plan used to calculate the level of incentives begins on March 1, 2017, the provisions on incentives and notice requirements will apply to the wellness program as of that date. For this purpose, the second lowest cost Silver Plan is treated as having a calendar year plan year.

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[22] Specifically, the Commission sought input on whether it would be appropriate to provide that the incentives employers offer to employees to promote participation in wellness programs must not render the cost of health insurance unaffordable to employees within the meaning of 26 U.S.C. 36B(c)(2)(C) as implemented by 26 CFR 54.4980H–5(e), under which an offer of health insurance coverage is affordable if the employee's required contribution for self-only coverage is no more than a specified percentage (9.5 percent as adjusted) of household income (or based on one of three affordability safe harbors set forth in 26 CFR 54.4980H–5(e)). For purposes of sections 36B and 4980H of the Code, the affordability of eligible employer-sponsored coverage is determined by assuming that each employee fails to satisfy the requirements of a wellness program, except for the requirements of a nondiscriminatory wellness program related to tobacco use. *See* 26 CFR 1.36B–2(c)(3)(v)(A)(4).

All other provisions of this final rule are clarifications of existing obligations that apply at, and prior to, issuance of this final rule.[23]

ADA's "Safe Harbor" Provision

A number of stakeholders commented on a footnote in the NPRM, which noted that the ADA's safe harbor provision applicable to insurance[24] does not apply to wellness programs that include disability-related questions or medical examinations. The safe harbor provision states, in pertinent part, that an insurer or any entity that administers benefit plans is not prohibited from "establishing, sponsoring, observing or administering the terms of a bona fide benefit plan based on underwriting risks, classifying risks, or administering such risks that are based on or not inconsistent with state law."

Employer associations and industry groups that commented on the footnote thought that the safe harbor provision applies to wellness programs that ask disability-related questions or require medical examinations. Several members of Congress asserted that the EEOC was inappropriately seeking to rewrite the statute and vacate court decisions through regulation. A few commenters distinguished between wellness programs that are part of a group health plan, to which the commenters said the safe harbor should apply, and those that are not part of a group health plan, to which it should not apply. Several noted that information obtained through wellness programs could provide employers with valuable insight that would help them develop and administer present and future plans. Two comments expressed the view that the EEOC has no authority to interpret the meaning of the safe harbor provision because it is in Title V of the ADA, not Title I, and these commenters urged deletion of the entire footnote.

The Commission has authority to interpret the safe harbor provision because, by its express terms, this provision applies to Titles I through IV of the ADA. Moreover, as stated in § 1630.14(d)(6) of this rule, we reaffirm our position that the safe harbor provision does not apply to an employer's decision to offer rewards or impose penalties in connection with wellness programs that include disability-related inquiries or medical examinations.

First, as we observed in the preamble to our proposed rule, the ADA, codified at 42 U.S.C. 12112(d)(4)(B), specifically provides an exception that allows employers to make disability-related inquiries or conduct medical examinations as part of an employee health program as long as employee participation is voluntary. To read the insurance safe harbor provision as applicable to wellness programs—and thus to permit incentives in excess of what this rule allows and even to permit practices such as requiring employees to participate in wellness programs in order to maintain their health insurance—would render 42 U.S.C. 12112(d)(4)(B) superfluous.[25]

One commenter disagreed, arguing that application of the insurance safe harbor provision to wellness programs that are part of a group health plan would not render 42 U.S.C. 12112(d)(4)(B) superfluous, as that section could still apply to wellness programs that are not part of a group health plan. We, however, discern no Congressional intent—either in the plain language of 42 U.S.C. 12112(d)(4)(B) or in the legislative history on that section of the ADA—to restrict the section's reach only to health programs that are not part of a group health plan.

Additionally, the plain language of the safe harbor provision, and an abundance of legislative history explaining it, make its narrow purpose clear. At the time the ADA was enacted, health plans were allowed to engage in some practices that are no longer permitted today. For example, before HIPAA made the practice illegal in 1996, group health plans were allowed to charge individuals in the plan higher rates based on increased risks associated with their medical conditions.[26] The ADA's safe harbor provision was intended to protect this now unlawful practice, provided that such decisions to treat people differently because of their medical conditions were based on real risks and costs associated with those conditions.

In commenting on the safe harbor provision, the report of the House Committee on Education and Labor accompanying the ADA noted:

> Under the ADA, a person with a disability cannot be denied insurance or be subject to different terms or conditions of insurance based on disability alone, if the disability does not impose increased risks.
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> * * *
>
> Moreover, while a plan which limits certain kinds of coverage based on classification of risk would be allowed under this section [codified at 42 U.S.C. 12201(c)], the plan may not refuse to insure, or refuse to continue to insure, or limit the amount, extent, or kind of coverage available to an individual, or charge a different rate for the same coverage solely because of a physical or mental impairment, except where the refusal, limitation, or rate differential is based on sound actuarial principles or is related to actual or reasonably anticipated experience.[27]
>
> For example, a blind person may not be denied coverage based on blindness independent o[f] actuarial risk classification.[28]

The same report summarized the safe harbor's purpose as follows:

> [S]ection 501 is intended to afford insurers and employers the same opportunities they would enjoy in the absence of this legislation to design and administer insurance products and benefit plans in a manner that is consistent with basic insurance risk classification. . . . Without such a clarification, the legislation could arguably find violative of its provisions any action taken by an insurer or employer which treats disabled persons differently under an insurance or benefit plan because they represent an increased hazard of illness or death.[29]

The safe harbor provision, then, allows the insurance industry and sponsors of insurance plans, such as employers, to treat individuals differently based on disability (normally a prohibited practice under the ADA), but only if the differences can be justified by increased risks and costs "based on sound actuarial data and not on speculation."[30]

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[23] Prior EEOC interpretations, including those set forth in the 1991 final rule implementing Title I of the ADA, Equal Employment Opportunities for Individuals With Disabilities, 56 FR 35726 (July 26, 1991), and in Commission guidance, *Guidance, supra* note 10, may be considered in determining whether wellness programs that began prior to this rule's applicability date and that ask employees disability-related questions or require them to undergo medical examinations comply with the ADA.

[24] 42 U.S.C. 12201(c).

[25] *See* Amendments to Regulations Under the Americans With Disabilities Act, 80 FR at 21662 n.24.

[26] *See* 29 U.S.C. 1182(b).

[27] *See* H.R. Rep. No. 101–485, pt. 2, at 136–37 (1990). The report further states that the "safe harbor" provision "ensures that decisions concerning the insurance of persons with disabilities which are not based on bona fide risk classification be made in conformity with non-discrimination requirements" and that benefit plans "need to be able to continue business practices in the way they underwrite, classify, and administer risks, so long as they carry out those functions in accordance with accepted principles of insurance risk classification." *Id.*; *see also* H.R. Rep. No. 101–485, pt. 3, at 71 (the "ADA requires that underwriting and classification of risks be based on sound actuarial principles or be related to actual or reasonably anticipated experience"); S. Rep. No. 101–116, at 84 (1989) ("The Committee does not intend that any provisions of this legislation should affect the way the insurance industry does business [under] State laws.").

[28] H.R. Rep. No. 101–485, pt. 2, at 137.

[29] *Id.* at 137–38; *see also* S. Rep. No. 101–116, at 85–86.

Nowhere does the ADA's legislative history refer to wellness programs in connection with the safe harbor provision. The evidence, in fact, is to the contrary. The only reference to wellness programs is in a committee report discussing the ADA provision governing voluntary health programs.[31]

Consistent with this legislative history, EEOC's ADA regulations, the interpretive guidance accompanying them, and interim enforcement guidance that the Commission issued in 1993 and that is still in effect, confirm that the safe harbor provision applies to the practices of the insurance industry with respect to the use of sound actuarial data to make determinations about insurability and the establishment of rates. Section 1630.16(f) of the regulations incorporates the language of section 501(c) of the ADA. The interpretive guidance provides that the safe harbor provision "is a limited exception that is only applicable to those who establish, sponsor, observe, or administer benefit plans, such as health and insurance plans. . . . The purpose of this provision is to permit the development and administration of benefit plans in accordance with accepted principles of risk assessment."[32] EEOC's interim guidance on insurance further states:

> Risk classification refers to the identification of risk factors and the grouping of those factors that pose similar risks. Risk factors may include characterizations such as age, occupation, personal habits (*e.g.*, smoking), and medical history. Underwriting refers to the application of the various risk factors or risk classes to a particular individual or group (usually only if the group is small) for the purpose of determining whether to provide insurance.[33]

Although employers claim that they use wellness programs to make their employees healthier and thus ultimately to reduce their health care costs, such use of wellness programs does not constitute underwriting or risk classification protected by the insurance safe harbor.

The Commission disagrees with the result in the two district court decisions that have applied the safe harbor provision far more expansively to support employers' imposition of penalties on employees who do not answer disability-related questions or undergo medical examinations in connection with wellness programs, *Seff* v. *Broward County*[34] and *EEOC* v. *Flambeau, Inc.*[35] However, neither court ruled that the language of the statute was unambiguous. Hence, the agency has the authority and responsibility to provide its own considered analysis of the statutory provision, which is provided above.[36]

The Commission also believes both cases were wrongly decided. The employers in *Seff* and *Flambeau* did not use wellness programs in a manner consistent with the application of the safe harbor provision. In neither *Seff* nor *Flambeau* did the employer or its health plan use wellness program data to determine insurability or to calculate insurance rates based on risks associated with certain conditions—the practices the safe harbor provision was intended to permit. Moreover, there is no evidence in either *Seff* or *Flambeau* that the decision to impose a surcharge or to exclude an employee from coverage under a health plan was based on actual risks that non-participating employees posed.

Seff, in particular, seems to endorse an almost limitless application of the safe harbor provision. The court thought the safe harbor applied because the wellness program was "designed to mitigate" risks and was "based on the theory" that getting employees to be involved in their own health care leads to a healthier workforce.[37] If this were a sufficient justification for the safe harbor, then any medical inquiry directed at an employee as part of a health plan is permissible if there is some possibility—real or theoretical—that the information might be used to reduce risks. Thus, the requirement in 42 U.S.C. 12112(d)(4)(B) that disability-related inquiries and medical examinations conducted as part of a health program must be voluntary would be meaningless for anyone who receives employer-provided health insurance, because any inquiry or medical examination could be defended on the ground that it might result in reduced health risks.

Comments Responding to Questions in the NPRM

Certification in Lieu of Answering Disability-Related Inquiries or Undergoing Medical Examinations

Individuals, including individuals with disabilities and their advocates, commented that employees should be allowed to provide a certification from a medical professional that any medical risks they have are under active treatment instead of being required to complete a HRA or undergo a medical examination. By contrast, health insurance issuers and employer groups generally commented that allowing an employee to submit such a certification instead of completing a HRA would circumvent the ability of a wellness program to assess and mitigate health risks.

The Commission has decided that although some employees already may be aware of their particular risk factors, a general certification or attestation that they are receiving medical care for those risks would limit the effectiveness of wellness programs that the Affordable Care Act clearly intends to promote. For example, employers may use aggregate information from HRAs to determine the prevalence of certain conditions in their workforce to design specific programs aimed at improving the health of employees with those conditions. The Commission concludes that protections in the final rule—such as the requirement that wellness programs be reasonably designed to promote health or prevent disease, and confidentiality requirements that have been further strengthened over those in the proposed rule—provide employees with significant protections without adopting a medical certification as an alternative to completion of a HRA or biometric screening.

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[30] H.R. Rep. No. 101–485, pt. 3, at 70. The safe harbor provision also permitted practices such as excluding or limiting coverage for individuals with pre-existing conditions (now prohibited as a result of the Affordable Care Act), even though they adversely affect people with disabilities, as long as they were not a subterfuge to evade the purposes of the ADA. *See* S. Rep. No. 101–116, at 29; H.R. Rep. No. 101–485, pt. 2, at 59.

[31] *See* H.R. Rep. No. 101–485, pt. 2, at 75 (noting that "[a] growing number of employers . . . are offering voluntary wellness programs" and that "[a]s long as the programs are voluntary and the medical records are maintained in a confidential manner and not used for the purpose of limiting health insurance eligibility or preventing occupational advancement, these activities would fall within the purview of accepted activities").

[32] 29 CFR part 1630, app. 1630.16(f).

[33] EEOC, *Interim Enforcement Guidance: Application of the ADA to Health Insurance* 13, n.15 (1993), *http://eeoc.gov/policy/docs/guidance.pdf.*

[34] *Seff* v. *Broward Cty.*, 778 F. Supp. 2d 1370 (S.D. Fla. 2011), *aff'd,* 691 F.3d 1221 (11th Cir. 2012) (involving an employer that charged employees who did not complete a health risk assessment 20 dollars every two weeks)

[35] *EEOC* v. *Flambeau, Inc.*, No. 14–cv–638–bbc, 2015 WL 9593632 (W.D. Wis. Dec. 30, 2015) (involving an employer that terminated insurance coverage of employee who did not undergo biometric screening).

[36] As the Supreme Court explained in *National Cable and Telecommunications Ass'n* v. *Brand X Internet Services,* 545 U.S. 967, 972 (2005), a judicial decision determining the meaning of a statutory provision is controlling only if it "holds that its construction follows from the unambiguous terms of the statute and thus leaves no room for agency discretion." This follows from the deference accorded agencies under *Chevron U.S.A. Inc.* v. *National Resources Defense Council,* 467 U.S. 837, XX (1984). *See also id.* at 985 ("Before a judicial construction of a statute, whether contained in a precedent or not, may trump an agency's, the court must hold that the statute unambiguously requires the court's construction.")

[37] *Seff,* 778 F. Supp. 2d at 1374.

Whether To Incorporate an "Affordability Standard" To Determine Whether a Wellness Program Is "Voluntary"

One individual commented that if the EEOC feels constrained to adopt the rule that the incentives provided in a wellness program that asks employees to respond to disability-related inquiries and/or undergo medical examinations may not be so large as to render health insurance coverage unaffordable under the Affordable Care Act, it should at least do so based on the cost of the family premium for individuals who have family coverage.[38] Several disability advocacy groups commented that if the Commission retains its proposed "30 percent rule," it should include protection for low-income employees and employees with disabilities, such that the incentives may not be so large as to render health insurance coverage unaffordable using a threshold far lower than the applicable percentage used to determine whether coverage is affordable under the Affordable Care Act (9.5 percent as adjusted). By contrast, a health insurance issuer commented that it is unclear how "low income" would be defined, or how an employer would be aware of an employee's household financial circumstances in order to determine which employees would be considered low income. Other industry groups commented that current Treasury regulations already provide that the affordability of eligible employer-sponsored coverage is determined by assuming that each employee fails to satisfy the requirements of a wellness program (except for the requirements of a nondiscriminatory wellness program related to tobacco use).[39]

The Commission has decided that by extending the 30 percent limit set under HIPAA and the Affordable Care Act to include participatory wellness programs that ask an employee to respond to a disability-related inquiry or undergo a medical examination, this rule promotes the ADA's interest in ensuring that incentive limits are not so high as to make participation in a wellness program involuntary. We also agree that the Treasury regulations that provide that the affordability of eligible employer-sponsored coverage is determined by assuming that each employee fails to satisfy the requirements of a wellness program (except for the requirements of a nondiscriminatory wellness program related to tobacco use) already serves as a constraint on the level of incentives an employer may offer, since affordability generally is calculated based on the employee's cost of coverage relative to his or her income without considering the value of any wellness program incentive. Accordingly, the Commission declines to incorporate an affordability standard into the final rule.

Wellness Programs Offered Outside of Employer-Sponsored Group Health Plans

Several comments were submitted in response to the question in the NPRM asking whether employers offer or are likely to offer wellness programs not in connection with a group health plan or group health insurance coverage (outside of a group health plan), and whether the final rule should specifically limit incentives provided as part of such programs. One advocacy group commented that more employers are sending employees to Exchanges for health care coverage but are offering wellness programs in an effort to improve employees' health and increase job productivity. Some commenters stated that the final rule should apply both to wellness programs that are part of an employer-sponsored health plan as well as to wellness programs offered outside of such plans, while others asked the EEOC to clarify what it means for a wellness program "to be part of, or provided by, a group health plan." One group said that an example of a wellness program offered outside of a group health plan is one that is available to all employees whether or not they participate in an employer-sponsored group health plan. Another group suggested criteria for determining whether a wellness program is part of or outside of a group health plan, such as: (1) Whether the program is offered by a vendor that has contracted with the group health plan or insurer; (2) whether it only is offered to employees enrolled in a group health plan; and (3) whether the wellness program is described as a covered benefit under the terms of the group health plan.

Rather than listing factors for determining whether a wellness program is part of, or outside of, an employer-sponsored group health plan, the Commission has decided that all of the provisions in this rule, including the requirement to provide a notice and the limitations on incentives, apply to all wellness programs that include disability-related inquiries and/or medical examinations. This means that this rule applies to wellness programs that are: offered only to employees enrolled in an employer-sponsored group health plan; offered to all employees regardless of whether they are enrolled in such a plan; or offered as a benefit of employment by employers that do not sponsor a group health plan or group health insurance.

We considered taking the position that wellness programs that are not offered through a group health plan that require employees to provide medical information could not offer any incentives. However, such an approach would be inconsistent with our conclusion, with respect to wellness programs that are part of a group health plan, that the offer of limited incentives will not render the program involuntary. Similarly, allowing unlimited incentives where a wellness program is not offered through a group health plan would be inconsistent with our position that limitations on incentives are necessary to ensure voluntariness. Accordingly, as noted below, this rule explains how to calculate the permissible incentive level for wellness programs regardless of whether they are related or unrelated to a group health plan.

Comments Regarding Specific Provisions

Section 1630.14(d)(1): Explanation of What Constitutes a "Health Program"

Some commenters suggested that the EEOC leave it to the tri-Departments to determine what constitutes a health or wellness program, while others commented that wellness programs should be required to be based on clinical guidelines or national standards or have a stronger connection between the content of a HRA and the development of specific disease management programs.

The final rule acknowledges that satisfaction of the "reasonably designed" standard must be determined by examining all of the relevant facts and circumstances and otherwise retains the NPRM's requirement that an employee health program, including any disability-related inquiries and medical examinations that are part of such a program, must be "reasonably designed to promote health or prevent disease." This standard is similar to the standard under the tri-Department regulations applicable to health-contingent wellness programs.[40] In order to meet this standard, a program—including a wellness program that is unrelated to a group health plan—must have a reasonable chance of improving the health of, or preventing disease in, participating employees and must not be overly burdensome, a subterfuge for violating the ADA or other laws prohibiting employment discrimination, or highly suspect in the method chosen to promote health or prevent disease. Programs consisting of a measurement, test, screening, or collection of health-related information without providing results, follow-up information, or advice designed to improve the health of participating employees would not be reasonably designed to promote health or prevent disease, unless the collected information actually is used to design a program that addresses at least a subset of conditions identified. Further, imposing a penalty solely on an employee's failure to achieve a particular health outcome (such as failing to attain a certain weight or cholesterol level) would, in many instances, discriminate against individuals based on disability.[41] The interpretive guidance offers examples of programs that would and would not meet this standard.

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[38] *See* 26 U.S.C. 36B(c)(2)(C); 26 CFR 54.4980H–5(e).

[39] *See* 26 CFR 1.36B–2(c)(3)(v)(A)(4).

[40] This rule applies the "reasonably designed" standard to both participatory and health-contingent wellness programs, while the tri-

Finally, because the ADA generally restricts the medical information employers may obtain from employees, the Commission believes that requiring wellness programs that include disability-related inquiries and/or medical examinations to be "reasonably designed to promote health or prevent disease" is necessary to give meaning to the exception for inquiries and examinations that are part of voluntary employee health programs. In addition, this is a standard with which health plans are now sufficiently familiar, and, thus, it is reasonable to apply that standard under the ADA to employers that sponsor wellness programs. Although the standard is less stringent than some commenters would prefer, the Commission believes it provides a sufficient level of protection against the misuse of employee medical information.

Section 1630.14(d)(2)(i) Through (iv): Definition of the Term "Voluntary"

(i) Does Not Require Employees To Participate

Individuals with disabilities and their advocates commented that participation in wellness programs is not voluntary when an employee has no choice or when financial penalties are the cost of opting out. By contrast, health insurance and employer groups commented that if an employee has a choice whether to participate, even if that choice may result in a penalty, participation should be considered voluntary.

To give meaning to the ADA's requirement that an employee's participation in a wellness program must be voluntary, the incentives for participation cannot be so substantial as to be coercive. We, therefore, reject the suggestion that merely offering employees a choice whether or not to participate renders participation voluntary, regardless of the consequences associated with that choice. Nonetheless, although substantial, the Commission concludes that, given current insurance rates, offering an incentive of up to 30 percent of the total cost of self-only coverage does not, without more, render a wellness program coercive. Accordingly, the final rule does not make any changes to the requirement that, in order for a wellness program to be considered voluntary, an employer may not require employees to participate in the program.

(ii) Does Not Deny Coverage Under Any Group Health Plan to Employees for Non-Participation

Some employer and health care groups commented that a number of employers have begun experimenting with tiered health plan benefit and cost-sharing structures (sometimes called "gateway plans") that base eligibility for a particular health plan on completing a HRA or undergoing biometric screenings and asked the Commission to allow for such plans. For example, a health insurance issuer commented that a current trend is to allow employees who participate in a wellness program to enroll in a comprehensive health plan, while offering non-participants a less comprehensive plan or one that requires higher premiums or cost-sharing.

The Commission concludes that the ADA does not prohibit an employer from denying an incentive that is within the limits set out in this final rule to an employee who does not participate in a wellness program that includes disability-related inquiries or medical examinations; nor does it prohibit requiring an employee to pay more for insurance that is more comprehensive. The ADA, however, does prohibit the outright denial of access to a benefit available by virtue of employment. When an employer denies access to a health plan because the employee does not answer disability-related inquiries or undergo medical examinations, it discriminates against the employee within the meaning of 42 U.S.C. 12112(d)(4) by requiring the employee to answer questions or undergo medical examinations that are not job related and consistent with business necessity and cannot be considered voluntary. Consequently, we decline to change this provision in the final rule to allow for the kind of tiered health plans described by commenters. However, an employer still may offer incentives up to 30 percent of the total cost of self-only coverage based on participation in a wellness program. Thus, an employee who chooses a more comprehensive health plan but declines to participate in a wellness program could pay more for the same comprehensive health plan than an employee who participates in a wellness program.

(iii) Does Not Take Any Adverse Action, Retaliate Against, or Coerce Employees Who Choose Not To Participate

Individuals, including individuals with disabilities and their advocates, and civil rights groups generally commented that because financial incentives can be significant enough to become coercive for many employees, the proposed rule did not offer enough protection and was inconsistent with the plain language of the ADA. Health insurance and employer groups, however, supported the provision.

No changes have been made to this paragraph, which states that, in order to be considered voluntary, an employer may not retaliate against, interfere with, coerce, intimidate, or threaten employees in violation of Section 503 of the ADA, codified at 42 U.S.C. 12203 (*e.g.*, by coercing an employee to

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Department regulations apply the standard only to health-contingent wellness programs. The tri-Department regulations also state that, in order to be reasonably designed, a health-contingent outcome-based wellness program must provide a reasonable alternative standard (or waiver) for an individual to qualify for a reward if the individual does not meet the initial standard based on a measurement, test, or screening that is related to a health factor. Under the ADA, a covered entity is required to provide a reasonable accommodation (a modification or adjustment) for a participatory program even though HIPAA and the Affordable Care Act do not require such programs to offer a reasonable alternative standard (although, under the HIPAA rules, a participatory program must be made available to all similarly situated individuals, regardless of health status). Finally, unlike the tri-Department regulations, the "reasonably designed" standard applies to all employee health programs that include disability-related inquiries and/or medical examinations, even if they are not related to a group health plan. *See* 26 CFR 54.9802–1(f)(3)(iii), (f)(4)(iii); 29 CFR 2590.702(f)(3)(iii), (f)(4)(iii); 45 CFR 146.121(f)(3)(iii), (f)(4)(iii).

[41] Changes made to the ADA by the ADA Amendments Act of 2008 adopted a broad definition of "disability" that makes it easier for an individual to show that he or she has a disability, a record of a disability, or that an employer took some adverse action because it regarded him or her as having a disability (such as imposed a penalty for not meeting a particular health outcome).

participate in an employee health program or threatening to discipline an employee who does not participate).

(iv) Notice

The Commission asked whether the requirement that employees participating in wellness programs that ask disability-related questions and/or require medical examinations be given a notice concerning the information to be collected, how it will be used, with whom it will be shared, and how it will be kept confidential should apply to all wellness programs and not just to wellness programs that are part of a group health plan. We also asked whether a notice should be required where a covered entity offers only "de minimis" incentives. (See the discussion of de minimis incentives under "Types of Incentives" below.)

Some disability advocacy groups commented that rather than trying to define what constitutes de minimis rewards or penalties, the notice requirements should apply to all programs that include disability-related inquiries or medical examinations, regardless of whether they are part of a group health plan or offer incentives. However, an employer group commented that any notice requirements should be waived where incentives are only de minimis.

Because the importance of the information the notice communicates does not depend on whether a wellness program is part of a group health plan or whether incentives are offered in connection with the program, this provision of the final rule clarifies that the requirement to provide a notice applies to all wellness programs that ask employees to respond to disability-related inquiries and/or undergo medical examinations. For these wellness programs to be deemed voluntary, a covered entity must provide a notice—in language reasonably likely to be understood by the employee from whom medical information is being obtained—that clearly explains what medical information will be obtained, how the medical information will be used, who will receive the medical information, the restrictions on its disclosure, and the methods the covered entity uses to prevent improper disclosure of medical information.

Commenters representing employer and health care groups said that the notice requirement is duplicative of existing law, while others asked the Commission to provide model language for a notice that would meet the necessary requirements. Where an employer's current written notifications to employees regarding wellness programs include the required information, the employer can continue to use those notifications for all of its wellness programs that ask employees to respond to disability-related inquiries and/or undergo medical examinations. However, where current notifications do not include the detailed information required by this provision, even if the employer claims to meet requirements under another law, it must revise existing notifications or develop a new notice to comply with this final rule. Within 30 days of the final rule's publication, the Commission will provide on its Web site an example of a notice that complies with this rule.

The Commission also asked whether the proposed notice provision should include a requirement that employees participating in wellness programs that include disability-related inquiries and/or medical examinations provide prior, written, and knowing confirmation that their participation is voluntary. Disability groups expressed concerns about employees who may unwittingly "waive" their privacy rights, particularly when completing online HRAs. For example, one group commented that some HRA Web sites include a provision, buried in an obscure link, stating that using the wellness program Web site constitutes a waiver of the person's privacy rights. Other groups commented that employees should have the option to actively opt in to a privacy notification agreement and that they should be fully informed of everything that the vendor or third party might do with personal health data, including: Marketing products and services to the employee; disclosing personal information to third party vendors that help provide services on the vendor's site; or authorizing the third party vendor to collect the employee's health information directly or indirectly from interaction with the services and/or from the employee's health care provider or health insurer.

Health insurance issuers and employer groups commented that requiring employers to collect signatures from non-participants would create an administrative burden and introduce additional costs and barriers to employers' willingness to offer wellness programs and to employees' participation. Another stakeholder said that if the point of the proposed regulation is to minimize confusion between the ADA and Affordable Care Act rules, requiring a written authorization would undermine that point and make the determination of a "voluntary" wellness program an employee-by-employee process rather than a determination made at the program level.

Although the Commission has decided not to include a requirement that employees must provide prior, written, and knowing authorization, we are concerned that the completion of a HRA or disclosure of health information in connection with a wellness program, particularly when online resources are used, would cause employees to waive critical confidentiality protections of their health information. We have addressed this concern in the final rule's provisions on confidentiality of medical information. (See the discussion of § 1630.14(d)(4)(v) below.)

Section 1630.14(d)(3): ADA's 30 Percent Limit on Financial Incentives Generally

The Commission received numerous comments on this provision of the proposed rule. As stated in the general comments section of this preamble, disability advocacy groups and individuals with disabilities said that the proposed rule was based on the erroneous assumption that the ADA must be "conformed" to provisions of the Affordable Care Act concerning wellness programs. They also commented that allowing wellness programs to offer incentives of up to 30 percent of the total cost of self-only coverage in exchange for employees responding to disability-related inquiries or undergoing medical examinations would be coercive and would substantially weaken the ADA's protections. While some individuals with disabilities did not categorically object to allowing employers to offer incentives to employees who provide health information, they stated that employees should not have to answer questions about their disabilities in order to receive whatever reward is offered. Employer and industry groups, however, commented that the EEOC should align the incentive limits for wellness programs with the incentive limits established in the tri-Department regulations.

The final rule reaffirms that an employer may offer incentives up to a maximum of 30 percent of the total cost of self-only coverage (including both the employee's and employer's contribution), whether in the form of a reward or penalty, to promote an employee's participation in a wellness program that includes disability-related inquiries and/or or medical examinations as long as participation is voluntary. The 30 percent limit applies to all workplace wellness programs whether they are: Offered only to employees enrolled in an employer-sponsored group health plan; offered to all employees whether or not they are enrolled in such a plan; or offered as a benefit of employment where an employer does not sponsor a group health plan or group health insurance coverage.

Calculation of Incentive Limit Based on Whether Employee Is Enrolled in a Health Plan

The final rule explains how to calculate the permissible incentive limit in four situations. First, where participation in a wellness program depends on enrollment in a particular group health plan, the employer may offer an incentive up to 30 percent of the total cost of self-only coverage (including both employer and employee contributions) under that plan. Second, where an employer offers a single group health plan, but participation in a wellness program does not depend on the employee's enrollment in that plan, an employer may offer an incentive of up to 30 percent of the total cost of self-only coverage under that plan. Third, where an employer has more than one group health plan, but participation in a wellness program does not depend on the employee's enrollment in any plan, the employer may offer an incentive up to 30 percent of the total cost of the lowest cost self-only coverage under a major medical group health plan offered by the employer. Finally, where an employer does not offer a group health plan or group health insurance coverage, the rule uses the cost of the second lowest cost Silver Plan[42] available through the state or federal health care Exchange established under the Affordable Care Act in the location that the employer identifies as its principal place of business as a benchmark for setting the incentive limit. Thus, an employer may offer incentives up to a maximum of 30 percent of the cost that would be charged for self-only coverage under such a plan if purchased by a 40-year-old non-smoker.

The Commission has concluded that the employer's lowest cost self-only coverage under a major medical group health plan is an appropriate benchmark for establishing the incentive limit where an employer has more than one group health plan and participation in a wellness program does not depend on enrollment in any particular plan for two reasons. First, it offers employers predictability and administrative efficiency in complying with the rule. Second, the rule is consistent with the Commission's objective of ensuring that incentives for answering disability-related questions or undergoing medical examinations do not become so high as to render the employee's participation involuntary.

The second lowest cost Silver Plan available on the Exchange in the location that the employer identifies as its principal place of business is used as a benchmark for determining the amount of an eligible individual's premium tax credit for purchasing health insurance on the Exchanges.[43] This is the most popular plan on the Exchanges, and information about its costs for individuals who are 40 years old and non-smokers is available to the public.[44] Additionally, because the Silver Plan typically is neither the least nor most expensive plan available on the Exchanges, incentive limits that are tied to its cost may promote participation in wellness programs while not being so high as to be coercive.

Types of Incentives

Some groups also commented that non-financial incentives should not be counted toward the cap. According to these commenters, determining the value of in-kind incentives, such as employee recognition, use of a parking spot, or easing of a dress code for a wellness participant are difficult, if not impossible, to determine and that including such non-financial incentives will add an additional administrative burden and possibly discourage the use of these kinds of incentives. Others commented that if the provision is adopted, the EEOC should avoid requiring plans to calculate the value of de minimis rewards when demonstrating compliance with applicable limits.

The final rule reaffirms that the offer of limited incentives (whether financial or in-kind) to encourage employees to participate in wellness programs that include disability-related inquiries and/or medical examinations will not render the program involuntary. However, the total allowable incentive available under all programs (both participatory and health-contingent programs), whether part of, or outside of, a group health plan, may not exceed 30 percent of the total cost of self-only coverage, which generally is the maximum allowable incentive available under HIPAA and the Affordable Care Act for health-contingent wellness programs.[45] The Commission sees no reason to exclude in-kind incentives based on the difficulty of valuing them when the tri-Department regulations clearly state that the term "incentives" means "any financial or other incentive."[46] Employers have flexibility to determine the value of in-kind incentives as long as the method is reasonable.

We also decline to exclude de minimis incentives. Although commenters gave examples of some incentives that might be considered de minimis, no commenters offered a workable principle or a dollar amount that could be used as the basis for defining which incentives are de minimis and which are not. We suspect that employers' interpretation of the term would vary, and there is no clear basis on which to establish a de minimis value threshold. Moreover, the tri-Department regulations do not distinguish between de minimis incentives and others for purposes of determining whether a plan has complied with the 30 percent incentive limit applicable to most health-contingent wellness programs, even though it is quite possible that health-contingent wellness programs utilize both de minimis and more substantial incentives. Consequently, we have not exempted the value of de minimis incentives from the 30 percent limit on incentives for wellness programs that include disability-related questions and/or medical examinations.

Calculation of Incentive Limit Based on Self-Only Coverage

Numerous commenters said that calculating the 30 percent limit on the total cost of self-only coverage does not align with the tri-Department regulations implementing HIPAA's wellness program provisions, which provide that the incentive limit applies to the total cost of coverage in which the employee and any dependents are enrolled, when wellness programs are available to an employee's dependents or spouse. Because the ADA's prohibitions on discrimination—including its restrictions on disability-related inquiries and medical examinations—apply only to applicants and employees, not their spouses and other dependents, this rule does not address the incentives wellness programs may offer in connection with dependent or spousal participation.[47] However, because medical history about an employee's family members, including an employee's dependents and spouse, is considered genetic information about the employee, incentives offered in exchange for an employee's family member to provide such information implicates Title II of GINA.[48] The EEOC also publishes today a final rule under GINA concerning the extent to which employers may offer incentives for spouses and other family members to provide health-related information as part of a wellness program.[49]

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[42] There are four "metal" categories of health plans in the Exchanges established under the Affordable Care Act: Bronze, Silver, Gold, and Platinum. *See How To Pick a Health Insurance Plan: The "Metal Categories", HealthCare.gov, https://www.healthcare.gov/choose-a-plan/plans-categories/* (last visited March 29, 2016).

[43] *See* 26 U.S.C. 36B(b)(2).

[44] *See, e.g.,* HHS, *Health Insurance Marketplaces 2015 Open Enrollment Period: March Enrollment Report* (2015), *https://aspe.hhs.gov/sites/default/files/pdf/83656/ib_2015mar_enrollment.pdf* (indicating that, based on marketplace enrollment from November 15, 2014 through February 15, 2015, 67 percent of people who selected a marketplace plan, selected Silver).

[45] *See* Incentives for Nondiscriminatory Wellness Programs in Group Health Plans, 78 FR 33158, 33,167 (June 3, 2013).

[46] *See* 26 CFR 54.9802–1(f)(1)(i); 29 CFR 2590.702(f)(1)(i); 45 CFR 146.121(f)(1)(i); *see also* FAQs About Affordable Care Act Implementation (Part XXIX) and Mental Health Parity Implementation, Q. 11, *http://www.dol.gov/ebsa/pdf/faq-aca29.pdf* (explaining that "a reward may be financial or non-financial (or in-kind). . . . [A]n individual obtaining a reward includes both 'obtaining a reward (such as a discount or rebate of a premium or contribution, a waiver of all or part of a cost-sharing mechanism (such as a deductible, copayment, or coinsurance), an additional benefit, or any financial or other incentive) and avoiding a penalty (such as the absence of a surcharge or other financial or nonfinancial disincentives)."

Incentives Related to Smoking Cessation Programs

The interpretive guidance accompanying the proposed rule explained the application of this provision to smoking cessation programs. Specifically, the interpretive guidance stated that because a smoking cessation program that merely asks employees whether or not they use tobacco (or whether or not they ceased using tobacco upon completion of the program) is not an employee health program that includes disability-related inquiries or medical examinations, the 30 percent incentive limit does not apply. Therefore, a covered entity may offer incentives as high as 50 percent of the cost of self-only coverage, pursuant to the regulations implementing section 2705(j) of the PHS Act, for such a program. However, the interpretive guidance explained that because any biometric screening or other medical procedure that tests for the presence of nicotine or tobacco is a medical examination under the ADA, the 30 percent incentive limit would apply to such a screening or procedure.

Some commenters said that the distinction the proposed rule made between inquiries about tobacco use and tests to determine such use was confusing. Additionally, a national trade association representing large employers commented that the ADA's prohibition on medical examinations was intended to prohibit employers from acquiring and improperly using knowledge about an employee's or applicant's disability and was not intended to protect employees from restrictions on tobacco usage, which is not a disability. Other employer groups commented that EEOC should not reverse course on the efforts being made by wellness programs to discourage tobacco use, particularly since employees are not required to quit smoking/using tobacco but, rather, simply asked to participate in cessation programs.

The final rule retains the distinction between smoking cessation programs that require employees to be tested for nicotine use and programs that merely ask employees whether they smoke. Although the fact that someone smokes is not information about a disability, the ADA's provisions limiting disability-related inquiries and medical examinations apply to all applicants and employees, whether or not they have disabilities.[50] Moreover, whatever benefit smoking cessation programs that are part of wellness programs may have, the Commission can discern no reason for treating medical examinations to detect the use of nicotine differently from any other medical examinations when the ADA makes no such distinction.

Section 1630.14(d)(4)(i) Through (iv) (Previously 1630.14(d)(4) Through (d)(6)): Explanation of the Requirements Regarding Confidentiality of Medical Information

The NPRM had three subsections addressing the confidentiality of medical information obtained through voluntary health programs. Specifically, the Commission redesignated paragraph (d)(1) in § 1630.14, which states that information regarding the medical condition or history of any employee shall be collected and maintained on separate forms and in separate medical files and be treated as a confidential medical record, as paragraph (d)(4) but did not change any of the exceptions to confidentiality set out in that section. It also redesignated paragraph (d)(2), which states that medical information regarding the medical history of any employee shall not be used for any purpose inconsistent with § 1630.14(d), as paragraph (d)(5). Finally, the Commission proposed to add a new paragraph (d)(6) to § 1630.14, concerning the confidentiality and use of medical information gathered in the course of providing voluntary health services to employees, including information collected as part of an employee's participation in an employee health program.

Paragraph (d)(6) in § 1630.14 stated that medical information collected through an employee health program only may be provided to a covered entity under the ADA in aggregate terms that do not disclose, or are not reasonably likely to disclose, the identity of specific individuals, except as needed to administer the health plan and except as permitted under § 1630.14(d)(4). The interpretive guidance explained that both employers that sponsor wellness programs and administrators of wellness programs acting as agents of employers have obligations to ensure compliance with this provision.

Employer and health care groups suggested that the confidentiality provisions applicable to wellness programs should be more closely aligned with the HIPAA privacy and security standards and the Affordable Care Act. For example, an employer group commented that the EEOC's guidance implies that compliance with HIPAA's privacy and security standards may not always satisfy the ADA's requirement and that the final rule should explicitly state that compliance with the HIPAA privacy and security standards would satisfy the confidentiality requirement. By contrast, one individual commented that the Commission should strengthen employment non-discrimination protections beyond allowing disclosure of only aggregate information to the employer and recommended that individuals have the right to request that employers delete all their wellness data if they stop participating in the wellness program, or leave their employer.

In response, the Commission retains the requirements set forth in this paragraph but includes additional requirements to further protect employees' personal health information. The final rule also places all of the confidentiality requirements in a single paragraph: paragraph (d)(4) in § 1630.14.[51]

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[47] The ADA's "association" provision that protects applicants and employees from discrimination based on their relationship or association with an individual with a disability also is not applicable here as it applies to only relationships to persons with a disability. *See* 42 U.S.C. 12112(b)(4).

[48] *See* 29 CFR 1635.3(c) (stating that genetic information includes information about "[t]he manifestation of disease or disorder in family members of [an] individual"); 29 CFR 1635.3(a)(1) (stating that a family member of an individual includes "a person who is a dependent of that individual as the result of marriage, birth, adoption, or placement for adoption").

[49] The final rule implementing Title II of GINA is published elsewhere in this issue of the **Federal Register**.

[50] *See Guidance, supra* note 10.

In response to comments that participation in a wellness program, particularly completion of an online HRA, may result in employees waiving critical confidentiality protections, the final rule adds a new paragraph, (d)(4)(iv), which is similar to a provision in the final rule issued today under Title II of GINA. Section 1630.14(d)(iv) states that a covered entity may not require an employee to agree to the sale, exchange, sharing, transfer, or other disclosure of medical information (except to the extent permitted by this part to carry out specific activities related to the wellness program), or to waive confidentiality protections available under the ADA as a condition for participating in a wellness program or receiving a wellness program incentive.

The Commission declines to include a requirement that employers or wellness programs delete medical information of employees who elect not to continue participating in a wellness program. The ADA only requires that medical information of employees participating in health programs be maintained as a confidential medical record, subject to limited exceptions for its disclosure. We are mindful that other laws may require the retention of such information. Even the ADA's confidentiality provisions, codified at 42 U.S.C. 12112(d)(3)(B)(iii) and (4)(C), contemplate that otherwise confidential medical information may have to be shared with government officials investigating compliance with the ADA.

Section 1630.14(d)(5): Explanation of the Rule's Relationship to Other EEOC Nondiscrimination Laws

This paragraph of the proposed rule (previously § 1630.14(d)(7)) clarified that compliance with paragraph (d) of this section, including the limit on incentives under the ADA, does not relieve a covered entity of its obligation to comply with other employment nondiscrimination laws. Some commenters suggested that the final rule should give specific examples of wellness programs that violate other nondiscrimination laws, especially those that may have a disparate impact on a protected group.

The Commission has revised the interpretive guidance accompanying the proposed rule to further explain that even if an employer's wellness program complies with the incentive limits set forth in the ADA regulations, the employer would violate Title VII or the ADEA if that program discriminates on the basis of race, sex (including pregnancy, gender identity, transgender status, and sexual orientation), national origin, age, or any other grounds prohibited by those statutes. The interpretive guidance also explains that if a wellness program requirement (such as achieving a particular blood pressure or glucose level or body mass index) disproportionately affects individuals on the basis of some protected characteristic, an employer may be able to avoid a disparate impact claim by offering and providing a reasonable alternative standard.

Regulatory Procedures

Executive Order 12866

Pursuant to Executive Order 12866, the EEOC has coordinated this final rule with the Office of Management and Budget. Under section 3(f)(1) of Executive Order 12866, the EEOC has determined that the amended regulation will not have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities.

Although a detailed cost-benefit analysis of the final rule is not required, the Commission recognizes that providing some information on potential costs and benefits of the rule may be helpful in assisting members of the public in better understanding the rule's potential impact. The Commission notes that by providing standards applicable to wellness program incentives and clarity about other ADA provisions (including the insurance safe harbor provision), the rule will significantly aid compliance with the ADA and with HIPAA's nondiscrimination provisions, as amended by the Affordable Care Act, by employers and group health plans that offer wellness programs. Currently, employers that offer wellness programs as part of group health plans face uncertainty as to whether providing incentives permitted by HIPAA will subject them to liability under the ADA. Additionally, employers that do not offer health plans and so are not subject to the wellness program provisions of HIPAA, as amended by the Affordable Care Act, have no way to determine what, if any, incentives they may want to offer are permissible under the ADA. This rule clarifies that the ADA does permit employers to offer incentives to promote participation in wellness programs that include disability-related inquiries and/or medical examinations and sets out the limits on such incentives. The rule also removes uncertainty about whether practices that have been the subject of litigation, such as conditioning enrollment in an employer's health plan on participation in a wellness program that asks disability-related questions or requires medical examinations, are prohibited.

The Commission does not believe the costs associated with the rule are significant. Employers covered by the ADA that offer wellness programs as part of their group health plans are already required to comply with wellness program incentive limits for health-contingent wellness programs. EEOC's final rule differs from HIPAA's wellness program incentives in that it extends the 30 percent limit on incentives under health-contingent wellness programs to participatory wellness programs. HIPAA, as amended by the Affordable Care Act, places no limits on incentives for participatory wellness programs. As the incentives offered by the vast majority of employers currently fall below the limit of 30 percent of the cost of self-only coverage, the Commission does not believe the rule will negatively affect the ability of employers to offer incentives sufficient to promote meaningful participation in wellness programs that are part of group health plans. Employers that offer wellness programs that do not require employees to participate in a particular group health plan can determine incentive limits by reference to readily available information about the cost of their own group health plan or, in the case of employers that do not offer group health insurance, the cost of the second lowest Silver Plan available under the state or federal Exchanges under the Affordable Care Act.

The only other potential cost is associated with the requirement that employers provide a notice to employees informing them what medical information will be obtained, how it will be used, who will receive it, and the restrictions on disclosure. For the reasons set forth in the Paperwork Reduction Act analysis that follows, the Commission concludes that approximately 265,880 employers will need to develop such a notice. The Commission estimates the time required to develop the notice to be four hours, for a total of 1,063,520 hours. According to data from the Bureau of Labor Statistics, the average hourly compensation for employees in "management, professional, and related" occupations was $55.56 as of

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[51] Nothing in this rule is intended to affect the ability of a health oversight agency to receive data under HIPAA. *See* 45 CFR 164.501 and 512(d).

December 2014, and the average hourly compensation for employees working in "office and administrative support" was $23.98.[52] Assuming that 50 percent of the time required to develop an appropriate notice is attributable to employees working in management, professional, and related occupations and that 50 percent of the time is attributable to employees working in office and administrative support, the Commission estimates that the total cost of developing a notice that complies with the requirements of the proposed rule would be $42,296,190. We note that some employers and group health plans may already have notices that comply with these requirements, and that those that do not will incur only a one-time cost to develop an appropriate notice. The Commission sought but did not receive comments on these cost estimates.

Other requirements in the rule will result in no costs since they simply restate basic principles of nondiscrimination under the ADA. Even in the absence of this rule, employers are prohibited from requiring employees to participate in employee health programs that include disability-related inquiries and/or medical examinations; denying employees health insurance (or any other benefit of employment) if they do not participate in wellness programs; retaliating against employees who file charges claiming that a wellness program violates the ADA; and attempting to induce participation in employee health programs through interference with their ADA rights or by coercion, intimidation, and threats. Employers are also required to provide reasonable accommodations to enable employees to enjoy the equal benefits and privileges of employment, including participation in employee health programs. To the extent confidentiality of medical information acquired in the course of providing an employee health program is required, the final rule will result in no additional costs as the ADA already requires employers to keep medical information about applicants and employees confidential.

To the extent this rule can be read to impose additional confidentiality obligations, the interpretive guidance to the rule makes clear that a wellness program that is part of a group health plan may satisfy its obligation to comply with § 1630.14(d)(4)(iii) by adhering to the HIPAA Privacy Rule.[53] An employer that is a health plan sponsor and receives individually identifiable health information from or on behalf of the group health plan, as permitted by HIPAA when the plan sponsor is administering aspects of the plan, may generally comply with this rule by certifying to the group health plan, also pursuant to the HIPAA Privacy Rule, that it will not use or disclose the information for purposes not permitted by its plan documents and the Privacy Rule, such as for employment purposes, and abiding by that certification. Further, if an employer is not performing plan administration functions on behalf of the group health plan, then the employer may receive aggregate information from the wellness program under § 1630.14(d)(4)(iii) only so long as it is de-identified in accordance with the HIPAA Privacy Rule.

Paperwork Reduction Act

The final rule contains an information collection requirement subject to review and approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act. As required by the Paperwork Reduction Act, the EEOC is submitting to OMB a request for approval of the information collection requirement under section 3507(d) of the Act.

Overview of This Information Collection

Collection Title: Notice requirement under Title I of the ADA, 29 CFR 1630.14(d)(2)(iv).

OMB number: 3046–0047.

Description of affected public: Employers with 15 or more employees that are subject to Title I of the ADA and offer wellness programs as part of, or outside of, group health plans.

Number of respondents: 265,880.

Initial one-time hour burden: 1,063,520.

Annual hour burden: None.

Number of forms: None.

Federal cost: None.

Abstract: The final rule says that a wellness program that includes disability-related inquiries or medical examinations—whether it is part of, or outside of, a group health plan—must meet several requirements to be deemed voluntary, including providing a notice to employees informing them what medical information will be obtained, how it will be used, who will receive it, and the restrictions on disclosure.

The NPRM asked for comments on whether the proposed notice requirement was necessary and on the accuracy of its burden estimate. Although none of the comments specifically addressed the burden estimate, some commenters said that the notice requirement was duplicative of existing law, while others asked the Commission to provide model language for a notice that would meet necessary requirements. *Burden Statement:* We estimate that there are approximately 782,000 employers with 15 or more employees subject to the ADA[54] and, of that number, one half to two thirds (391,000 to 521,333) offer some type of wellness program as part of, or outside of, a group health plan.[55] Of those employers, 32 percent to 51 percent require employees to complete a HRA that likely contains disability-related questions.[56] Using the highest estimates, we assume that 265,880 employers (51 percent of 521,333 employers) will be covered by this requirement.

The final rule states that, to the extent that employers already use forms that provide the requisite information in an applicable document that complies with disclosures required under ERISA and HIPAA, they do not have to create a new notice to satisfy the requirements of this provision and can use the same notice for all of its wellness programs that ask employees to respond to disability-related inquiries and/or undergo medical examinations. Therefore, the burden only will be on employers that will incur a one-time burden to develop an appropriate notice to ensure that employees who provide medical information pursuant to a wellness program do so voluntarily. This notice may be included on or attached to any HRA employees are asked to complete and should explain what medical information will be obtained, how it will be used, who will receive it, and the restrictions on disclosure.

Within 30 days of the final rule's publication, the Commission will provide on its Web site an example of a notice that complies with the rule. Thus, the Commission anticipates that the sample notice will reduce an employer's burden by making it easier to satisfy this requirement. Because we do not have data on which to base an estimate of time saved, we likely overstate the burden by assuming that creation of such a document will take four hours, and assuming that 265,880 employers will be covered by rule, this one-time burden would be 1,063,520 hours. Because employers do not have to develop a new form unless they collect medical information for a different purpose, they will be able to annually redistribute the same notice to all relevant employees.

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[52] *See* Bureau of Labor Statistics, *Employer Costs for Employee Compensation—December 2014* (2015), *www.bls.gov/news.release/pdf/ecec.pdf.*

[53] *See* 45 CFR parts 160 and 164, subparts A and E, respectively.

[54] *See Firm Size Data,* Small Business Administration, *http://www.sba.gov/advocacy/849/12162 (last visited March 28, 2016).*

[55] According a RAND report, "approximately half of U.S. employers offer wellness promotion initiatives." *RAND Final Report, supra* note X, at xiv. By contrast, a survey by the Kaiser Family Foundation found that "[s]eventy-four percent of employers offering health benefits" offer at least one wellness program. *See Kaiser Survey, supra* note 6, at 6.

[56] The *Kaiser Survey* reports that 51 percent of large employers versus 32 percent of small employers ask employees to complete a HRA.

Regulatory Flexibility Act

Title I of the ADA applies to approximately 782,000 employers with 15 or more employees, approximately 764,233 of which are small firms (entities with 15–500 employees) according to data provided by the Small Business Administration Office of Advocacy.[57]

The Commission certifies under 5 U.S.C. 605(b) that this proposed rule will not have a significant economic impact on a substantial number of small entities because it imposes no reporting burdens and only minimal costs. The final rule clarifies that, in most respects, employers that offer wellness programs that are part of, or outside of, their health plans may offer incentives to employees consistent with HIPAA and the Affordable Care Act without violating the ADA. The rule also clarifies that employers that offer wellness programs to all employees, regardless of whether they are enrolled in a group health plan, and employers that offer wellness programs but do not provide group health insurance, also may provide incentives for participation in such programs consistent with the limits set forth in this rule.

To the extent that employers will expend resources to train human resources staff and others on the revised rule, we note that the EEOC conducts extensive outreach and technical assistance programs, many of them at no cost to employers, to assist in the training of relevant personnel on EEO-related issues. For example, in fiscal year 2014, the agency's outreach programs reached more than 236,000 persons through participation in more than 3,500 no-cost educational, training, and outreach events. Now that this rule is final, we will include information about the revisions to the regulations in our general outreach programs and continue to offer ADA-specific outreach programs that will include this information. On the date this rule is published, we also will post technical assistance documents on our Web site explaining the revisions to these regulations, as we do with all of our new regulations and policy documents.

We estimate that the typical human resources professional will need to dedicate, at most, 90 minutes to gain a satisfactory understanding of the revised regulations. We further estimate that the median hourly pay rate of a human resources professional is approximately $49.41.[58] Assuming that small entities have between one and five human resources professionals/managers, we estimate that the cost per entity of providing appropriate training will be between approximately $74.12 and $370.60.

The EEOC does not believe that this cost will be significant for the impacted small entities.

Unfunded Mandates Reform Act of 1995

This rule will not result in the expenditure by state, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year, and it will not significantly or uniquely affect small governments. Therefore, no actions were deemed necessary under the provisions of the Unfunded Mandates Reform Act of 1995.

List of Subjects in 29 CFR Part 1630

Equal employment opportunity, Individuals with disabilities.

For the reasons set forth in the preamble, the EEOC amends 29 CFR part 1630 as follows:

PART 1630—[AMENDED]

■ 1. The authority citation for part 1630 continues to read as follows:

Authority: 42 U.S.C. 12116 and 12205a of the American with Disabilities Act, as amended.

■ 2. In § 1630.14:

■ a. Redesignate paragraph (d)(1) introductory text as paragraph (d)(4)(i) with the subject heading *Confidentiality;*

■ b. Add new paragraph (d)(1) introductory text;

■ c. Redesignate paragraphs (d)(1)(i), (ii), and (iii) as (d)(4)(i)(A), (B), and (C);

■ d. Redesignate paragraph (d)(2) as paragraph (d)(4)(ii);

■ e. Add new paragraph (d)(2) and paragraph (d)(3);

■ f. Add paragraphs (d)(4)(iii) and (d)(4)(iv); and

■ g. Add paragraphs (d)(5) and (6);

The revisions and additions read as follows:

§ 1630.14 Medical examinations and inquiries specifically permitted.

* * * * *

(d) * * *

(1) *Employee health program.* An employee health program, including any disability-related inquiries or medical examinations that are part of such program, must be reasonably designed to promote health or prevent disease. A program satisfies this standard if it has a reasonable chance of improving the health of, or preventing disease in, participating employees, and it is not overly burdensome, is not a subterfuge for violating the ADA or other laws prohibiting employment discrimination, and is not highly suspect in the method chosen to promote health or prevent disease. A program consisting of a measurement, test, screening, or collection of health-related information without providing results, follow-up information, or advice designed to improve the health of participating employees is not reasonably designed to promote health or prevent disease, unless the collected information actually is used to design a program that addresses at least a subset of the conditions identified. A program also is not reasonably designed if it exists mainly to shift costs from the covered entity to targeted employees based on their health or simply to give an employer information to estimate future health care costs. Whether an employee health program is reasonably designed to promote health or prevent disease is evaluated in light of all the relevant facts and circumstances.

(2) *Voluntary.* An employee health program that includes disability-related inquiries or medical examinations (including disability-related inquiries or medical examinations that are part of a health risk assessment) is voluntary as long as a covered entity:

(i) Does not require employees to participate;

(ii) Does not deny coverage under any of its group health plans or particular benefits packages within a group health plan for non-participation, or limit the extent of benefits (except as allowed under paragraph (d)(3) of this section) for employees who do not participate;

(iii) Does not take any adverse employment action or retaliate against, interfere with, coerce, intimidate, or threaten employees within the meaning of Section 503 of the ADA, codified at 42 U.S.C. 12203; and

(iv) Provides employees with a notice that:

(A) Is written so that the employee from whom medical information is being obtained is reasonably likely to understand it;

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[57] *See Firm Size* Data, *supra* note 54.

[58] *See Occupational Employment and Wages,* Bureau of Labor Statistics, *http://www.bls.gov/oes/current/oes113121.htm (last visited March 28, 2016).*

(B) Describes the type of medical information that will be obtained and the specific purposes for which the medical information will be used; and

(C) Describes the restrictions on the disclosure of the employee's medical information, the employer representatives or other parties with whom the information will be shared, and the methods that the covered entity will use to ensure that medical information is not improperly disclosed (including whether it complies with the measures set forth in the HIPAA regulations codified at 45 CFR parts 160 and 164).

(3) *Incentives offered for employee wellness programs.* The use of incentives (financial or in-kind) in an employee wellness program, whether in the form of a reward or penalty, will not render the program involuntary if the maximum allowable incentive available under the program (whether the program is a participatory program or a health-contingent program, or some combination of the two, as those terms are defined in regulations at 26 CFR 54.9802–1(f)(1)(ii) and (iii), 29 CFR 2590.702(f)(1)(ii) and (iii), and 45 CFR 146.121(f)(1)(ii) and (iii), respectively) does not exceed:

(i) Thirty percent of the total cost of self-only coverage (including both the employee's and employer's contribution) of the group health plan in which the employee is enrolled when participation in the wellness program is limited to employees enrolled in the plan;

(ii) Thirty percent of the total cost of self-only coverage under the covered entity's group health plan, where the covered entity offers only one group health plan and participation in a wellness program is offered to all employees regardless of whether they are enrolled in the plan;

(iii) Thirty percent of the total cost of the lowest cost self-only coverage under a major medical group health plan where the covered entity offers more than one group health plan but participation in the wellness program is offered to employees whether or not they are enrolled in a particular plan; and

(iv) Thirty percent of the cost of self-only coverage under the second lowest cost Silver Plan for a 40-year-old non-smoker on the state or federal health care Exchange in the location that the covered entity identifies as its principal place of business if the covered entity does not offer a group health plan or group health insurance coverage.

(4) * * *

(iii) Except as permitted under paragraph (d)(4)(i) of this section and as is necessary to administer the health plan, information obtained under this paragraph (d) regarding the medical information or history of any individual may only be provided to an ADA covered entity in aggregate terms that do not disclose, or are not reasonably likely to disclose, the identity of any employee.

(iv) A covered entity shall not require an employee to agree to the sale, exchange, sharing, transfer, or other disclosure of medical information (except to the extent permitted by this part to carry out specific activities related to the wellness program), or to waive any confidentiality protections in this part as a condition for participating in a wellness program or for earning any incentive the covered entity offers in connection with such a program.

(5) Compliance with the requirements of this paragraph (d), including the limit on incentives under the ADA, does not relieve a covered entity from the obligation to comply in all respects with the nondiscrimination provisions of Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e *et seq.*, the Equal Pay Act of 1963, 29 U.S.C. 206(d), the Age Discrimination in Employment Act of 1967, 29 U.S.C. 621 *et seq.*, Title II of the Genetic Information Nondiscrimination Act of 2008, 42 U.S.C. 2000ff, *et seq.*, or other sections of Title I of the ADA.

(6) The "safe harbor" provisions in § 1630.16(f) of this part applicable to health insurance, life insurance, and other benefit plans do not apply to wellness programs, even if such plans are part of a covered entity's health plan.

■ 3. In the Appendix to Part 1630 revise Section 1630.14(d), to read as follows:

Appendix to Part 1630—Interpretive Guidance on Title I of the Americans With Disabilities Act

* * * * *

Section 1630.14 Medical Examinations and Inquiries Specifically Permitted

Section 1630.14(d)(1): Health Program

Part 1630 permits voluntary medical examinations and inquiries, including voluntary medical histories, as part of employee health programs. These health programs include many wellness programs, which often incorporate, for example: A health risk assessment (HRA) consisting of a medical questionnaire, with or without medical examinations, to determine risk factors; medical screening for high blood pressure, cholesterol, or glucose; classes to help employees stop smoking or lose weight; physical activities in which employees can engage (such as walking or exercising daily); coaching to help employees meet health goals; and/or the administration of flu shots. Many employers offer wellness programs as part of a group health plan as a means of improving overall employee health with the goal of realizing lower health care costs. Other employers offer wellness programs that are available to all employees, regardless of whether they are in enrolled in a group health plan, while some employers offer wellness programs but do not sponsor a group health plan or group health insurance.

It is not sufficient for a covered entity merely to claim that its collection of medical information is part of a wellness program; the program, including any disability-related inquiries and medical examinations that are part of such program, must be reasonably designed to promote health or prevent disease. In order to meet this standard, the program must have a reasonable chance of improving the health of, or preventing disease in, participating employees, and must not be overly burdensome, a subterfuge for violating the ADA or other laws prohibiting employment discrimination, or highly suspect in the method chosen to promote health or prevent disease. Asking employees to complete a HRA and/or undergo a biometric screening for the purpose of alerting them to health risks of which they may have been unaware would meet this standard, as would the use of aggregate information from HRAs by an employer to design and offer health programs aimed at specific conditions identified by the information collected. An employer might conclude from aggregate information, for example, that a significant number of its employees have diabetes or high blood pressure and might design specific programs that would enable employees to treat or manage these conditions. On the other hand, collecting medical information on a health questionnaire without providing employees meaningful follow-up information or advice, such as providing feedback about specific risk factors or using aggregate information to design programs or treat any specific conditions, would not be reasonably designed to promote health or prevent disease. Additionally, a program is not reasonably designed to promote health or prevent disease if it imposes, as a condition to obtaining a reward, an overly burdensome amount of time for participation, requires unreasonably intrusive procedures, or places significant costs related to medical examinations on employees. A program also is not reasonably designed if it exists mainly to shift costs from the covered entity to targeted employees based on their health or simply to give an employer information to estimate future health care costs.

Section 1630.14(d)(2): Definition of "Voluntary"

Section 1630.14(d)(2)(i) through (iii) of this part says that participation in employee health programs that include disability-related inquiries or medical examinations (such as disability-related inquiries or medical examinations that are part of a HRA) must be voluntary in order to comply with the ADA. This means that covered entities may not require employees to participate in such programs, may not deny employees access to health coverage under any of their group health plans or particular benefits packages within a group health plan for non-participation, may not limit coverage under their health plans for such employees, except to the extent the limitation (*e.g.*, having to pay a higher deductible) may be the result of forgoing a financial incentive permissible under § 1630.14(d)(3), and may not take any other adverse action against employees who choose not to answer disability-related inquiries or undergo medical examinations. Additionally, covered entities may not retaliate against, interfere with, coerce, intimidate, or threaten employees within the meaning of Section 503 of the ADA, codified at 42 U.S.C. 12203. For example, an employer may not retaliate against an employee who declines to participate in a health program or files a charge with the EEOC concerning the program, may not coerce an employee into participating in a health program or into giving the employer access to medical information collected as part of the program, and may not threaten an employee with discipline if the employee does not participate in a health program. *See* 42 U.S.C. 12203(a),(b); 29 CFR 1630.12.

Section 1630.14(d)(2)(iv) of this part also states that for a wellness program that includes disability-related inquiries or medical examinations to be voluntary, an employer must provide employees with a notice clearly explaining what medical information will be obtained, how the medical information will be used, who will receive the medical information, the restrictions on its disclosure, and the methods the covered entity uses to prevent improper disclosure of medical information.

Section 1630.14(d)(3): Limitations on Incentives

The ADA, interpreted in light of the Health Insurance Portability and Accountability Act (HIPAA), as amended by the Affordable Care Act, does not prohibit the use of incentives to encourage participation in employee health programs, but it does place limits on them. In general, the use of limited incentives (which include both financial and in-kind incentives, such as time-off awards, prizes, or other items of value) in a wellness program will not render a wellness program involuntary. However, the maximum allowable incentive for a participatory program that involves asking disability-related questions or conducting medical examinations (such as having employees complete a HRA) or for a health-contingent program that requires participants to satisfy a standard related to a health factor may not exceed: (i) 30 Percent of the total cost of self-only coverage (including both the employee's and employer's contribution) where participation in a wellness program depends on enrollment in a particular health plan; (ii) 30 percent of the total cost of self-only coverage when the covered entity offers only one group health plan and participation in a wellness program is offered to all employees regardless of whether they are enrolled in the plan; (iii) 30 percent of the total cost of the lowest cost self-only coverage under a major medical group health plan where the covered entity offers more than one group health plan but participation in the wellness program is offered to employees whether or not they are enrolled in a particular plan; or (iv) 30 percent of the cost to a 40-year-old non-smoker of the second lowest cost Silver Plan (available under the Affordable Care Act) in the location that the employer identifies as its principal place of business, where the covered entity does not offer a group health plan or group health insurance coverage. The following examples illustrate how to calculate the permissible incentive limits in each of these situations.

Where an employee participates in a wellness program that is only offered to employees enrolled in a group health plan and the total cost of self-only coverage under that plan is $6,000 annually, the maximum allowable incentive is $1,800 (30 percent of $6,000). The same incentive would be available if this employer offers only one group health plan and allowed employees to participate in the wellness program regardless of whether they are enrolled in the health plan. Suppose, however, an employer offers three different group health plans with the total cost of self-only coverage under its major medical group health plans ranging in cost from $5,000 to $8,000 annually and wants to offer employees incentives for participating in a wellness program that includes a HRA and medical examination regardless of whether they are enrolled in a particular health plan. In that case, the maximum allowable incentive is $1,500 (30 percent of the total cost of the lowest cost self-only coverage under a major medical group health plan). Finally, if the employer does not offer health insurance but wants to offer an incentive for employees to participate in a wellness program that includes disability-related inquiries or medical examinations, the maximum allowable incentive is 30 percent of what it would cost a 40-year-old non-smoker to purchase the second lowest cost Silver Plan on the federal or state health care Exchange in the location that the employer identifies as its principal place of business. Thus, if such a plan would cost $4,000, the maximum allowable incentive would be $1,200.

Not all wellness programs require disability-related inquiries or medical examinations in order to earn an incentive. Examples may include attending nutrition, weight loss, or smoking cessation classes. These types of programs are not subject to the ADA incentive rules discussed here, although programs that qualify as health-contingent programs (such as an activity-based program that requires employees to exercise or walk) and that are part of a group health plan are subject to HIPAA incentive limits.

Under the ADA, regardless of whether a wellness program includes disability-related inquiries or medical examinations, reasonable accommodations must be provided, absent undue hardship, to enable employees with disabilities to earn whatever financial incentive an employer or other covered entity offers. Providing a reasonable alternative standard and notice to the employee of the availability of a reasonable alternative under HIPAA and the Affordable Care Act as part of a health-contingent program would generally fulfill a covered entity's obligation to provide a reasonable accommodation under the ADA. However, under the ADA, a covered entity would have to provide a reasonable accommodation for a participatory program even though HIPAA and the Affordable Care Act do not require such programs to offer a reasonable alternative standard, and reasonable alternative standards are not required at all if the program is not part of a group health plan.

For example, an employer that offers employees a financial incentive to attend a nutrition class, regardless of whether they reach a healthy weight as a result, would have to provide a sign language interpreter so that an employee who is deaf and who needs an interpreter to understand the information communicated in the class could earn the incentive, as long as providing the interpreter would not result in undue hardship to the employer. Similarly, an employer would, absent undue hardship, have to provide written materials that are part of a wellness program in an alternate format, such as in large print or on computer disk, for someone with a vision impairment. An individual with a disability also may need a reasonable accommodation to participate in a wellness program that includes disability-related inquiries or medical examinations, including a waiver of a generally applicable requirement. For example, an employer that offers a reward for completing a biometric screening that includes a blood draw would have to provide an alternative test (or certification requirement) so that an employee with a disability that makes drawing blood dangerous can participate and earn the incentive.

Application of Section 1630.14(d)(3) to Smoking Cessation Programs

Regulations implementing the wellness provisions in HIPAA, as amended by the Affordable Care Act, permit covered entities to offer incentives as high as 50 percent of the total cost of self-only coverage for tobacco-related wellness programs, such as smoking cessation programs. As noted above, the incentive rules in paragraph 1630.14(d)(3) apply only to employee health programs that include disability-related inquiries or medical examinations. A smoking cessation program that merely asks employees whether or not they use tobacco (or whether or not they ceased using tobacco upon completion of the program) is not an employee health program that includes disability-related inquiries or medical examinations. The incentive rules in § 1630.14(d)(3) would not apply to incentives a covered entity could offer in connection with such a program. Therefore, a covered entity would be permitted to offer incentives as high as 50 percent of the cost of self-only coverage for that smoking cessation program, pursuant to the regulations implementing HIPAA, as amended by the Affordable Care Act, without implicating the disability-related inquiries or medical examinations provision of the ADA. The ADA nondiscrimination requirements, such as the need to provide reasonable accommodations that provide employees with disabilities equal access to benefits, would still apply.

By contrast, a biometric screening or other medical examination that tests for the presence of nicotine or tobacco is a medical examination. The ADA financial incentive rules discussed *supra* would therefore apply to a wellness program that included such a screening.

Section 1630.14(d)(4)(i) Through (v): Confidentiality

Paragraphs (d)(4)(i) and (ii) say that medical records developed in the course of providing voluntary health services to employees, including wellness programs, must be maintained in a confidential manner and must not be used for any purpose in violation of this part, such as limiting insurance eligibility. *See* House Labor Report at 75; House Judiciary Report at 43–44. Further, although an exception to confidentiality that tracks the language of the ADA itself states that information gathered in the course of providing employees with voluntary health services may be disclosed to managers and supervisors in connection with necessary work restrictions or accommodations, such an exception would rarely, if ever, apply to medical information collected as part of a wellness program, and sharing such information could be inconsistent with the definition of an employee health program. In addition, as described more fully below, certain disclosures that are permitted for employee health programs generally may not be permissible under the HIPAA Privacy Rule for wellness programs that are part of a group health plan without the written authorization of the individual.

Section 1630.14(d)(4)(iii) says that a covered entity only may receive information collected as part of an employee health program in aggregate form that does not disclose, and is not reasonably likely to disclose, the identity of specific individuals except as is necessary to administer the plan or as permitted by § 1630.14(d)(4)(i). Notably, both employers that sponsor employee health programs and the employee health programs themselves (if they are administered by the employer or qualify as the employer's agent) are responsible for ensuring compliance with this provision.

Where a wellness program is part of a group health plan, the individually identifiable health information collected from or created about participants as part of the wellness program is protected health information (PHI) under the HIPAA Privacy, Security, and Breach Notification Rules. (45 CFR parts 160 and 164.) The HIPAA Privacy, Security, and Breach Notification Rules apply to HIPAA covered entities, which include group health plans, and generally protect identifiable health information maintained by or on behalf of such entities, by among other provisions, setting limits and conditions on the uses and disclosures that may be made of such information.

PHI is information, including demographic data that identifies the individual or for which there is a reasonable basis to believe it can be used to identify the individual (including, for example, address, birth date, or social security number), and that relates to: An individual's past, present, or future physical or mental health or condition; the provision of health care to the individual; or the past, present, or future payment for the provision of health care to the individual. HIPAA covered entities may not disclose PHI to an individual's employer except in limited circumstances. For example, as discussed more fully below, an employer that sponsors a group health plan may receive PHI to administer the plan (without authorization of the individual), but only if the employer certifies to the plan that it will safeguard the information and not improperly use or share the information. *See Standards for Privacy of Individually Identifiable Health Information* ("Privacy Rule"), Public Law 104–191; 45 CFR part 160 and Part 164, Subparts A and E. However, there are no restrictions on the use or disclosure of health information that has been de-identified in accordance with the HIPAA Privacy Rule. Individuals may file a complaint with HHS if they believe a health plan fails to comply with privacy requirements and HHS may require corrective action or impose civil money penalties for noncompliance.

A wellness program that is part of a HIPAA covered entity likely will be able to comply with its obligation under § 1630.14(d)(4)(iii) by complying with the HIPAA Privacy Rule. An employer that is a health plan sponsor and receives individually identifiable health information from or on behalf of the group health plan, as permitted by HIPAA when the plan sponsor is administering aspects of the plan, may generally satisfy its requirement to comply with § 1630.14(d)(4)(iii) by certifying to the group health plan, as provided by 45 CFR 164.504(f)(2)(ii), that it will not use or disclose the information for purposes not permitted by its plan documents and the Privacy Rule, such as for employment purposes, and abiding by that certification. Further, if an employer is not performing plan administration functions on behalf of the group health plan, it may receive aggregate information from the wellness program under § 1630.14(d)(4)(iii) only so long as the information is de-identified in accordance with the HIPAA Privacy Rule. In addition, disclosures of protected health information from the wellness program may only be made in accordance with the Privacy Rule. Thus, certain disclosures that are otherwise permitted under § 1630.14(d)(4)(i) and (ii) for employee health programs generally may not be permissible under the Privacy Rule for wellness programs that are part of a group health plan without the written authorization of the individual. For example, the ADA allows disclosures of medical information when an employee needs a reasonable accommodation or requires emergency treatment at work.

Section 1630.14(d)(4)(iv) says that a covered entity may not require an employee to agree to the sale, exchange, sharing, transfer, or other disclosure of medical information (except to the extent permitted by this part to carry out specific activities related to the wellness program), or waive confidentiality protections available under the ADA as a condition for participating in a wellness program or receiving a wellness program incentive.

Employers and wellness program providers must take steps to protect the confidentiality of employee medical information provided as part of an employee health program. Some of the following steps may be required by law; others may be best practices. It is critical to properly train all individuals who handle medical information about the requirements of the ADA and, as applicable, HIPAA's privacy, security, and breach requirements and any other privacy laws. Employers and program providers should have clear privacy policies and procedures related to the collection, storage, and disclosure of medical information. On-line systems and other technology should guard against unauthorized access, such as through use of encryption for medical information stored electronically. Breaches of confidentiality should be reported to affected employees immediately and should be thoroughly investigated. Employers should make clear that individuals responsible for disclosures of confidential medical information will be disciplined and should consider discontinuing relationships with vendors responsible for breaches of confidentiality.

Individuals who handle medical information that is part of an employee health program should not be responsible for making decisions related to employment, such as hiring, termination, or discipline. Use of a third-party vendor that maintains strict confidentiality and data security procedures may reduce the risk that medical information will be disclosed to individuals who make employment decisions, particularly for employers whose organizational structure makes it difficult to provide adequate safeguards. If an employer uses a third-party vendor, it should be familiar with the vendor's privacy policies for ensuring the confidentiality of medical information. Employers that administer their own wellness programs need adequate firewalls in place to prevent unintended disclosure. If individuals who handle medical information obtained through a wellness program do act as decision-makers (which may be the case for a small employer that administers its own wellness program), they may not use the information to discriminate on the basis of disability in violation of the ADA.

Section 1630.14(d)(5): Compliance With Other Employment Nondiscrimination Laws

Section 1630.14(d)(5) clarifies that compliance with the requirements of paragraph (d) of this section, including the limits on incentives applicable under the ADA, does not mean that a covered entity complies with other federal employment nondiscrimination laws, such as Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e *et seq.*, the Equal Pay Act of 1963, 29 U.S.C. 206(d), the Age Discrimination in Employment Act of 1967, 29 U.S.C. 621 *et seq.*, Title II of the Genetic Information Nondiscrimination Act of 2008, 42 U.S.C. 2000ff *et seq.*, and other sections of Title I of the ADA. Thus, even though an employer's wellness program might comply with the incentive limits set out in paragraph (d)(3), the employer would violate federal nondiscrimination statutes if that program discriminates on the basis of race, sex (including pregnancy, gender identity, transgender status, and sexual orientation), color, religion, national origin, or age. Additionally, if a wellness program requirement (such as a particular blood pressure or glucose level or body mass index) disproportionately affects individuals on the basis of some protected characteristic, an employer may be able to avoid a disparate impact claim by offering and providing a reasonable alternative standard.

Section 1630.14(d)(6): Inapplicability of the ADA's Safe Harbor Provision

Finally, section 1630.14(d)(6) states that the "safe harbor" provision, set forth in section 501(c) of the ADA, 42 U.S.C. 12201(c), that allows insurers and benefit plans to classify, underwrite, and administer risks, does not apply to wellness programs, even if such programs are part of a covered entity's health plan. The safe harbor permits insurers and employers (as sponsors of health or other insurance benefits) to treat individuals differently based on disability, but only where justified according to accepted principles of risk classification (some of which became unlawful subsequent to passage of the ADA). *See* Senate Report at 85–86; House Education and Labor Report at 137–38. It does not apply simply because a covered entity asserts that it used information collected as part of a wellness program to estimate, or to try to reduce, its risks or health care costs.

Dated: May 11, 2016.

For the Commission:

Jenny R. Yang,

Chair.

[FR Doc. 2016–11558 Filed 5–16–16; 8:45 am]

BILLING CODE 6570–01–P

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

29 CFR Part 1635

RIN 3046–AB02

Genetic Information Nondiscrimination Act

AGENCY: Equal Employment Opportunity Commission.

ACTION: Final rule.

SUMMARY: The Equal Employment Opportunity Commission (EEOC or Commission) is issuing a final rule to amend the regulations implementing Title II of the Genetic Information Nondiscrimination Act of 2008 as they relate to employer-sponsored wellness programs. This rule addresses the extent to which an employer may offer an inducement to an employee for the employee's spouse to provide information about the spouse's manifestation of disease or disorder as part of a health risk assessment (HRA) administered in connection with an employer-sponsored wellness program. Several technical changes to the existing regulations are included. Published elsewhere in this issue of the **Federal Register**, the EEOC also issued a final rule to amend the regulations and interpretive guidance implementing Title I of the Americans with Disabilities Act (ADA) that addresses the extent to which employers may use incentives to encourage employees to participate in wellness programs that ask them to respond to disability-related inquiries and/or undergo medical examinations.

DATES: *Effective date:* This rule is effective July 18, 2016.

Applicability date: This rule is applicable beginning on January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Christopher J. Kuczynski, Assistant Legal Counsel, at (202) 663–4665 (voice), or Kerry E. Leibig, Senior Attorney Advisor, at (202) 663–4516 (voice), or (202) 663–7026 (TTY). (These are not toll free numbers.) Requests for this rule in an alternative format should be made to the Office of Communications and Legislative Affairs, at (202) 663–4191 (voice) or (202) 663–4494 (TTY). (These are not toll free numbers.)

SUPPLEMENTARY INFORMATION: The Commission issued a proposed rule in the **Federal Register** on October 30, 2015, for a 60-day notice and comment period, which was extended for an additional 30 days and ended on January 28, 2016. After consideration of the public comments, the Commission has revised portions of both the final rule and the preamble.

Introduction

Several federal laws govern wellness programs offered by employers. Employer-sponsored wellness programs must comply with Title II of the Genetic Information Nondiscrimination Act of 2008 (GINA),[1] Title I of the ADA,[2] and other employment discrimination laws enforced by the EEOC. Employer-sponsored wellness programs that are part of, or provided by, a group health plan [3], or that are provided by a health insurance issuer offering group health insurance in connection with a group health plan, must also comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) nondiscrimination provisions, as amended by the Affordable Care Act, which is enforced by the Department of Labor (DOL), Department of the Treasury (Treasury), and Department of Health and Human Services (HHS) (referred to collectively as the tri-Departments).[4] This final rule relates specifically to the requirements of Title II of GINA as they apply to employer-sponsored wellness programs, though other applicable laws are discussed in some detail.

Congress enacted Title II of GINA to protect job applicants, current and former employees, labor union members, and apprentices and trainees from employment discrimination based on their genetic information.[5] GINA generally restricts the acquisition and disclosure of genetic information and prohibits the use of genetic information in making employment decisions.[6] The EEOC issued implementing regulations on November 9, 2010, to provide all persons subject to Title II of GINA additional guidance with regard to the law's requirements.[7]

Discussion

Title II of GINA prohibits the use of genetic information in making employment decisions in all circumstances, with no exceptions. It also restricts employers and other entities covered by GINA[8] from requesting, requiring, or purchasing genetic information, unless one or more of six narrow exceptions applies, and strictly limits the disclosure of genetic information by GINA-covered entities.[9] The statute and the 2010 Title II final rule define "genetic information" to include: Information about an individual's genetic tests; information about the genetic tests of a family member; information about the manifestation of a disease or disorder in family members of an individual (*i.e.*, family medical history);[10] requests for and receipt of genetic services by an individual or a family member; and genetic information about a fetus carried by an individual or family member or of an embryo legally held by the individual or family member using assisted reproductive technology.[11] Family members of an individual include someone who is a dependent of an individual through marriage, birth, adoption, or placement for adoption and any other individual who is a first-, second-, third-, or fourth-degree relative of the individual.[12]

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[1] 42 U.S.C. 2000ff–2000ff–11.

[2] 42 U.S.C. 12101–12117.

[3] The term "group health plan" includes both insured and self-insured group health plans, and is used interchangeably with the terms "health plan" and "the plan" in this Final Rule.

[4] The Patient Protection and Affordable Care Act, Public Law 111–148, and the Health Care and Education Reconciliation Act, Public Law 111–152, are known collectively as the Affordable Care Act. Section 1201 of the Affordable Care Act amended and moved the nondiscrimination and wellness provisions of the Public Health Service (PHS) Act from section 2702 to section 2705 and extended the nondiscrimination provisions to the individual health insurance market. The Affordable Care Act also added section 715(a)(1) to the Employee Retirement Income Security Act (ERISA) and section 9815(a)(1) to the Internal Revenue Code (Code) to incorporate the provisions of part A of title XXVII of the PHS Act, including PHS Act section 2705, into ERISA and the Code.

[5] Title I of GINA applies to genetic information discrimination in health coverage (not employment), is applicable to group health plans and health insurance issuers, and is administered by the tri-Departments. Under Title I, group health plans may include, as part of a HRA, questions regarding the manifestation of a disease or disorder of individuals covered under the plan, but not genetic information (defined to include genetic test information about the individual or of family members of the individual or the manifestation of disease or disorder in family members of the individual not covered under the plan). *See* 42 U.S.C. 300gg–91(d)(16); *see also* 26 CFR 54.9802–3T(b)(2); 29 CFR 2590.702–1(b)(2); 45 CFR 146.122(a)(3). This final rule, however, which is specific to Title II, provides that all health information provided by a spouse to an employer as part of a HRA is genetic information with respect to the employee, even where both the employee and spouse are covered by the plan.

[6] S. Rep. No. 110–48, at 10 (2007); H.R. Rep. No. 110–28, pt. 3, at 29 (2007).

[7] *See* Regulations Under the Genetic Information Nondiscrimination Act of 2007, 75 FR 68,912 (Nov. 9, 2010) (codified at 29 CFR pt. 1635).

There are only six limited circumstances in which an employer[13] may request, require, or purchase genetic information about an applicant or employee. One exception permits employers that offer health or genetic services, including such services offered as part of voluntary wellness programs,[14] to request genetic information as part of these programs, as long as certain specific requirements are met.[15] The regulations implementing Title II currently make clear that one of the requirements is that the employer-sponsored wellness program cannot condition inducements to employees on the provision of genetic information.[16] This requirement is derived from a prohibition in Title I of GINA (which applies to health plans and health insurance issuers) against adjusting premium or contribution amounts on the basis of genetic information.[17]

Although the EEOC received no comments prior to the publication of the Title II final rule in 2010 regarding how GINA's restriction on employers' acquiring genetic information interacts with the practice of offering employees inducements where a spouse participates in an employer-sponsored wellness program, this question arose after publication of the Title II final rule in 2010. Read one way, such a practice could be interpreted to violate the 29 CFR 1635.8(b)(2)(ii) prohibition on providing financial inducements in return for an employee's protected genetic information. This is because information an employer seeks from a spouse (who is a "family member" under GINA as set forth at 42 U.S.C. 2000ff(4)(a)(ii) and 29 CFR 1635.3(a)(1)) about his or her manifestation of disease or disorder is treated under GINA as requesting genetic information about the employee. Although the EEOC's original regulations specifically permitted employers to seek information about manifestation of diseases or disorders in employees' family members who are receiving health or genetic services from the employer, including such services offered as part of a voluntary employer-sponsored wellness program,[18] the regulations did not say whether inducements could be provided in exchange for such information. The Commission now finalizes the clarification that an employer may, in certain circumstances, offer an employee limited inducements for the employee's spouse to provide information about the spouse's manifestation of disease or disorder as part of a HRA administered in connection with an employer-sponsored wellness program, provided that GINA's confidentiality requirements are observed and any information obtained is not used to discriminate against an employee.[19] However, this narrow exception to the general rule that inducements may not be offered in exchange for an employee's genetic information does not extend to genetic information about a spouse or to information about manifestation of diseases or disorders in, or genetic information about, an employee's children.

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[8] Unless otherwise noted, the term "GINA" refers to Title II of GINA.

[9] *See* 42 U.S.C. 2000ff–2000ff–11; *see also* 29 CFR 1635.4–1635.9.

[10] Congress recognized "that a family medical history could be used as a surrogate for genetic traits by a health plan or health insurance issuer. A consistent history of a heritable disease in a patient's family may be viewed to indicate that the patient himself or herself is at increased risk for that disease." For that reason, Congress believed it was important to include family medical history in the definition of "genetic information." S. Rep. No. 110–48, at 28.

[11] *See* 42 U.S.C. 2000ff(4), 2000ff–8(b); *see also* 29 CFR 1635.3.

[12] *See* 42 U.S.C. 2000ff(3)(A) (defining family member for purposes of GINA to include a dependent within the meaning of section 701(f)(2) of ERISA); *see also* 29 CFR 1635.3(a). The Commission's definition of "dependent" is solely for purposes of interpreting Title II of GINA, and is not relevant to interpreting the term "dependent" under Title I of GINA or under section 701(f)(2) of ERISA and the parallel provisions of the PHS Act and the Code. See the preamble to the EEOC's regulations implementing Title II of GINA at 75 FR 68,914, note 5 (and the preamble to the regulations implementing Title I of GINA at 74 FR 51,664, 51,666) for additional information.

[13] GINA applies to individuals and covered entities in addition to employees and employers, including employment agencies, unions and their members, and joint-labor management training and apprenticeship programs. *See* 42 U.S.C. 2000ff–1, 2000ff–2, 2000ff–3, 2000ff–4 (describing the prohibited practices of each of these entities); *see also* 29 CFR 1635.2(b) (defining "covered entity"), 1635.4 (describing prohibited practices). For the sake of readability, and recognizing that employers will be the covered entity most likely to offer employer-sponsored wellness programs, the preamble will refer to employers and employees throughout.

[14] A wellness program, defined as a "program offered by an employer that is designed to promote health or prevent disease," is one type of health or genetic service that an employer might offer. *See* Section 2705(j)(1)(A) of the PHS Act, as amended by the Affordable Care Act. A wellness program that provides medical care (including genetic counseling) may constitute a group health plan required to comply with section 9802 of the Code, 26 U.S.C. 9802, section 702 of the ERISA, 29 U.S.C. 1182, or section 2705 of the PHS Act (*i.e.*, Title I of GINA). Regulations issued under these statutes address employer-sponsored wellness programs that collect genetic information. Moreover, employer-sponsored wellness programs that condition rewards on an individual satisfying a standard related to a health factor must meet additional requirements. *See* 26 CFR 54.9802–1(f); 29 CFR 2590.702(f); 45 CFR 146.121(f). As noted above, the EEOC has also issued a final rule amending the regulations and interpretive guidance implementing Title I of the ADA as they relate to employer-sponsored wellness programs. *See* 29 CFR 1630.14, published elsewhere in this issue of the **Federal Register**.

[15] *See* 42 U.S.C. 2000ff–1(b)(2), 2000ff–2(b)(2), 2000ff–3(b)(2), 2000ff–4(b)(2); *see also* 29 CFR 1635.8(b)(2). Other health or genetic services include services such as an Employee Assistance Program or a health clinic that provides flu shots. Under GINA, employers may request genetic information as part of such health or genetic services, as long as the requirements of 29 CFR 1635.8(b)(2) are met.

[16] *See* 29 CFR 1635.8(b)(2)(ii). Consistent with the requirements of paragraph (b)(2)(i) of this section, a covered entity may not offer an inducement for individuals to provide genetic information, but may offer inducements for completion of HRAs that include questions about family medical history or other genetic information, provided the covered entity makes clear, in language reasonably likely to be understood by those completing the HRA, that the inducement will be made available whether or not the participant answers questions regarding genetic information.

[17] Title I of GINA applies to genetic information discrimination in health coverage and not employment. The Departments responsible for enforcing Title I determined that permitting employers to condition wellness program inducements on the provision of genetic information would undermine Title I's prohibition on adjusting premium or contribution amounts on the basis of genetic information. For more on the protections provided by Title I of GINA, see DOL—Employee Benefits Security Administration, *FAQs on the Genetic Information Nondiscrimination Act* (2010), *www.dol.gov/ebsa/pdf/faq-GINA.pdf*. For a discussion of how Titles I and II of GINA allow employers and plans to use financial inducements to promote employee wellness and healthy lifestyles, see the preamble to the 2010 Title II final rule at 75 FR 68,923 (Nov. 9, 2010).

[18] *See* 29 CFR 1635.8(c)(2).

[19] One industry group argued that using the phrase "current or past health status" to describe the types of questions to spouses that could include inducements was confusing because not all information about a spouse's current or past health status meets the definition of genetic information. In order to clarify that the rule only applies to questions asked of the spouse that meet the definition of genetic information, the final rule will replace the phrase "current or past health status" with "manifestation of disease or disorder."

Background on the Notice of Proposed Rulemaking on GINA and Employer-Sponsored Wellness Programs

The Commission drafted a Notice of Proposed Rulemaking (NPRM) that was circulated to the Office of Management and Budget for review (pursuant to Executive Order 12866) and to federal executive branch agencies for comment (pursuant to Executive Order 12067).[20] The NPRM was then published in the **Federal Register** on October 30, 2015 for a 60-day public comment period,[21] which was extended for an additional 30 days [22] and ended on January 28, 2016.

The NPRM sought comment on the proposed revisions to the GINA regulation which:

- Clarified that an employer may offer, as part of its health plan, a limited inducement (in the form of a reward or penalty) to an employee whose spouse (1) is covered under the employee's health plan; (2) receives health or genetic services offered by the employer, including as part of a wellness program; and (3) provides information about his or her current or past health status.
- Explained that the total inducement for an employee and spouse to participate in an employer-sponsored wellness program that is part of a group health plan and collects information about the spouse's current or past health status may not exceed 30 percent of the total cost of the plan in which the employee and any dependents are enrolled.
- Described how inducements must be apportioned between the employee and spouse.
- Explained that inducements may be financial or in kind, consistent with regulations issued by DOL, HHS, and Treasury to implement the wellness program provisions in the Affordable Care Act. For that reason, the proposed rule deleted the term "financial" where it appeared as a modifier for the term "inducement" in 29 CFR 1635.8(b)(2).
- Explained that any request for current or past health status information from an employee's spouse must comply in all other respects with 29 CFR 1635.8(b)(2) concerning requests for genetic information that are part of voluntary health or genetic services offered by an employer.
- Explained that an employer may not require employees (or employees' spouses or dependents covered by the employees' health plan) to agree to the sale, or waive the confidentiality, of their genetic information as a condition for receiving an inducement or participating in an employer-sponsored wellness program.
- Added an example making it clear that a request for current or past health status information from an employee's spouse who is participating in a wellness program does not constitute an unlawful request for genetic information about the employee.
- Made several technical changes to correct a previous drafting error and to add references, where needed, to HIPAA and the Affordable Care Act.

Additionally, the Commission specifically sought comments on several other issues, including:

- Whether employers that offer inducements to encourage the spouses of employees to disclose information about current or past health status must also offer similar inducements to persons who choose not to disclose such information but, who instead, provide certification from a medical professional stating that the spouse is under the care of a physician and that any medical risks identified by that physician are under active treatment.
- Whether the proposed authorization requirements apply only to employer-sponsored wellness programs that offer more than de minimis rewards or penalties to employees whose spouses provide information about current or past health status as part of a HRA.
- Which best practices or procedural safeguards ensure that employer-sponsored wellness programs are designed to promote health or prevent disease and do not operate to shift costs to employees with spouses who have health impairments or stigmatized conditions.
- Whether the rule should include more specific guidance to employers regarding how to implement the requirements of 29 CFR 1635.9(a) for electronically stored records. If so, what procedures are needed to achieve GINA's goal of ensuring the confidentiality of genetic information with respect to electronic records stored by employers.
- Whether there are best practices or procedural safeguards to ensure that information about spouses' current health status is protected from disclosure.
- Whether the regulation should restrict the collection of any genetic information by an employer-sponsored wellness program to only the minimum necessary to directly support the specific wellness activities, interventions, and advice provided through the program—namely information collected through the program's HRA and biometric screening. Should programs be prohibited from accessing genetic information from other sources, such as patient claims data and medical records data.
- Whether employers offer (or are likely to offer in the future) wellness programs outside of a group health plan or group health insurance coverage that use inducements to encourage employees' spouses to provide information about current or past health status as part of a HRA, and the extent to which the GINA regulations should allow inducements provided as part of such programs.

Summary of Revisions and Response to Comments

During the 60-day comment period, which was extended by 30 days, the Commission received 3,003 [23] comments on the NPRM from a wide spectrum of stakeholders, including, among others: Individuals, including individuals with disabilities; disability rights and other advocacy organizations and their members; members of Congress; employer associations and industry groups; and health insurance issuers, third party administrators, and wellness vendors. The comments from individuals included 2,911 similar, but not uniform, letters—almost all of which were submitted by a national organization that supports women and families. Most of the comments (3,000) were submitted through the United States Government's electronic docket system, *Regulations.gov*, under EEOC–2015–0009. The remaining three comments were mailed or faxed to the Executive Secretariat.

The Commission has reviewed and considered each of the comments in preparing this final rule. The first section of this preamble begins by clarifying the purpose of this rule. It goes on to address general comments about the interaction between GINA and the wellness program provisions of

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[20] While there are differences between the definitions and requirements for wellness programs set forth in the Affordable Care Act, PHS Act, ERISA, the Code, and Title II of GINA, this final rule is being issued after review by and consultation with the tri-Departments.

[21] Genetic Information Nondiscrimination Act, 80 FR 66853 (proposed October 30, 2015) (to be codified at 29 CFR part 1635).

[22] Genetic Information Nondiscrimination Act, 80 FR 75956 (proposed December, 7, 2015) (to be codified at 29 CFR part 1635).

[23] One of these comments was withdrawn when the commenter submitted a "corrected" version of the comment.

HIPAA, as amended by the Affordable Care Act; interaction between GINA and the ADA; the final rule's applicability date; the rule's treatment of inducements for information from the children of employees; the confidentiality protections of the rule; tobacco cessation programs; and the Commission's burden calculations.

The second section discusses comments submitted in response to questions the NPRM asked about several issues, as noted above.

The third section addresses comments regarding specific provisions of the rule.

General Comments

Purpose of the Rule

Many comments submitted by individuals objected to a rule that would allow employers to charge employees more for benefits based on the illness of family members, impose stiff penalties on people that do not measure up to certain health guidelines, allow employers to fire or otherwise adversely treat employees based on medical information collected through employer-sponsored wellness programs, and/or allow "metrics" that would harm millions of people with disabilities. This rule, however, is more limited in scope. Instead, it addresses the very limited question of the extent to which an employer may offer inducements to an employee for the employee's spouse to provide information about the spouse's manifestation of disease or disorder as part of a HRA administered in connection with an employer-sponsored wellness program. The absolute prohibition on the use of genetic information to make employment decisions enshrined in Title II of GINA remains intact, as do the existing protections of Title I of the ADA, which prohibits discrimination on the basis of disability.

Interaction Between GINA and HIPAA's Wellness Program Provisions

The Commission received comments expressing support for and/or concerns about employer-sponsored wellness programs. For example, many commenters stated that although properly designed employer-sponsored wellness programs have the potential to help employees become healthier and bring down health care costs, they believe that these programs also carry serious potential for discrimination in ways already prohibited by GINA and other civil rights laws, by allowing employers to coerce employees into providing genetic information (as well as other health information). Disability rights and health advocacy groups expressed concern that the EEOC was abandoning its prior position that GINA prohibits financial inducements in return for all genetic information, while employer and industry groups commented that the proposed rule's limitation on inducements was inconsistent with the wellness program rules under section 2705(j) of the PHS Act. Disability rights groups further noted that there was no need to alter Title II of GINA's prohibition on financial incentives in order to conform to laws that regulate insurance discrimination, given that Title II of GINA is about employment discrimination, and pointed out that the tri-Department wellness regulations explicitly state that GINA imposes separate and additional restrictions.

Although the Commission recognizes that compliance with the standards in HIPAA, as amended by the Affordable Care Act, is not determinative of compliance with Title II of GINA,[24] we believe that the final rule interprets GINA in a manner that reflects both GINA's goal of providing strong protections against employment discrimination based on the possibility that an employee or the employee's family member may develop a disease or disorder in the future and HIPAA's provisions promoting wellness programs. Additionally, as we pointed out in the preamble to the proposed rule, allowing limited inducements for spouses to provide information about manifested diseases or disorders (but not their own genetic information) as part of a HRA administered in connection with an employer-sponsored wellness program is consistent with HIPAA, as amended by the Affordable Care Act, and Title I of GINA.[25] Accordingly, after consideration of all of the comments, the Commission reaffirms its conclusion that allowing inducements in return for a spouse providing information about his or her manifestation of disease and disorder, while limiting inducements to prevent economic coercion, is the best way to effectuate the purposes of the wellness provisions of GINA and HIPAA.

Interaction With the ADA and Other Equal Employment Opportunity (EEO) Laws

The Commission received a number of comments requesting that the final rule be issued jointly with the final ADA wellness rule, a suggestion that has been adopted.

Comments raising more substantive concerns about the interaction between the ADA and GINA focused on the desire for alignment of the inducement limits available under the statutes, suggesting that the incentive limit under the ADA, which is based on the total cost of self-only coverage, be revised to correspond with the inducement limit proposed in the GINA NPRM, which is based on the total cost of coverage for the plan in which the employee and any dependents are enrolled. The Commission declines to adopt this recommendation, however, because the ADA does not apply to the inducements employer-sponsored wellness programs offer in connection with spousal participation. As discussed in more detail below, this final GINA rule will, consistent with the ADA final rule, limit the maximum share of the inducement attributable to the employee's participation in an employer-sponsored wellness program (or multiple employer-sponsored wellness programs that request such information) to up to 30 percent of the cost of self-only coverage. Furthermore, the maximum total inducement for a spouse to provide information about his or her manifestation of disease or disorder will also be 30 percent of the total cost of (employee) self-only coverage, so that the combined total inducement will be no more than twice the cost of 30 percent of self-only coverage.

An advocacy group representing older individuals commented that protections similar to those proposed in the ADA wellness NPRM against conditioning access to employer-provided health insurance on the provision of medical information to an employer-sponsored wellness program and on retaliation against those who do not participate should be included in the GINA final rule. Protections in the statute and the existing GINA regulations make clear that an employer may not use genetic information to make employment decisions, including decisions about benefits.[26] Both the statute and the existing regulations also provide that it is unlawful for an employer to discriminate against any individual because that individual has opposed any act or practice made unlawful by Title II of GINA.[27] We agree, however, that it would improve the final rule specifically to provide that it is a violation of Title II of GINA for an employer to deny access to health insurance or any package of health insurance benefits to an employee and/or his or her family members, or to retaliate against an employee, based on a spouse's refusal to provide information about his or her manifestation of disease or disorder to an employer-sponsored wellness program. We have added clarification to the final rule at § 1635.8(b)(2)(v).

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[24] As the tri-Department wellness regulations acknowledge, the Affordable Care Act did not amend or overturn GINA, and compliance with the Affordable Care Act and its implementing regulations is not determinative of compliance with GINA. *See* Incentives for Nondiscriminatory Wellness Programs in Group Health Plans, 78 FR 33158, 33168 (June 3, 2013). A publication issued jointly by the tri-Departments further explains that a wellness program that complies with the tri-Departments' wellness program regulations does not necessarily comply with any other provision of the PHS Act, the Code, ERISA, (including the Consolidated Omnibus Budget Reconciliation Act (COBRA) continuation provisions), or any other state or federal law, such as the ADA, or the privacy and security obligations of HIPAA, where applicable. Similarly, the fact that an employer-sponsored wellness program meets the requirements of the ADA is not determinative of compliance with the PHS Act, ERISA, or the Code. *See* DOL—Employee Benefits Security Administration, *FAQs about the Affordable Care Act Implementation (part XXV)*, Question 2 (2015), *http://www.dol.gov/ebsa/pdf/faq-aca25.pdf* and *https://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/Downloads/Tri-agency-Wellness-FAQS-4-16-15pdf-AdobeAcrobat-Pro.pdf.*

[25] *See* 80 FR at 66857, *supra* note 20.

Another advocacy group whose mission is to protect the rights of women and girls asked that the final rule include language making clear that in addition to complying with the requirements of the final rule, employers must abide by other nondiscrimination provisions, including, for example, Title VII of the Civil Rights Act of 1964. We have not added any language to the final rule on this topic because the existing regulations already state that nothing contained in § 1635.8(b)(2) limits the rights or protections of an individual under the ADA, or other applicable civil rights laws, or under HIPAA, as amended by GINA. We have made technical revisions to this provision due to the changes made to the renumbering of other provisions.

Applicability Date

Employer associations and industry groups submitted comments regarding the effective date of the final rule, recommending that it allow enough time for employers to bring their wellness programs into compliance, that it be issued jointly with the ADA wellness rule, and that it not be applied retroactively. The Commission agrees and concludes that the provisions of § 1635.8(b)(2)(iii) related to wellness program inducements will apply only prospectively to employer-sponsored wellness programs as of the first day of the first plan year that begins on or after January 1, 2017, for the health plan used to determine the level of inducement permitted under this regulation. So, for example, if the plan year for the health plan used to calculate the permissible inducement limit begins on January 1, 2017, that is the date on which the provisions of this rule governing inducements apply to the employer-sponsored wellness program. If the plan year of the plan used to calculate the level of inducements begins on March 1, 2017, the provisions on inducements will apply to the employer-sponsored wellness program as of that date. For this purpose, the second lowest cost Silver Plan is treated as having a calendar year plan year.

All other provisions of this final rule are clarifications of existing obligations that apply at, and prior to, issuance of this final rule.[28]

Prohibition on Inducements for Information From Children of Employees

A number of advocacy groups, employer groups, and industry groups, in addition to members of Congress, submitted comments concerning the Commission's proposal that no inducement be permitted in return for the current or past health status information or the genetic information of employees' children. Two commenters, pointing to the fact that Title II of GINA defines "family members" to include both spouses and children, argued that there was no basis for making a distinction between spouses and children and that, therefore, no inducements should be permitted in return for current or past health information of either. Others argued that prohibiting inducements in return for past or current health information of children conflicts with the Affordable Care Act's requirement that employers who offer health insurance coverage to dependents of employees must offer coverage to dependents up to age 26 and that, therefore, inducements should be permitted in return for current or past health information from both spouses and children. Although some commenters agreed with the Commission's argument that health information about a child is more likely to reveal genetic information about an employee, one commenter noted that this does not support the distinction made in the proposed rule because the same cannot be said of health information about a spouse and adopted children. Commenters also asked for clarification of whether the prohibition applied to the current or past health status information of all children, including children up to the age of 26 who are permitted to remain on their parents' health plans, or just minor children, with some urging the Commission to extend the prohibition and others arguing that children between the ages of 18 and 26 were not in need of this additional protection and would benefit from participation in an employer-sponsored wellness program.

The Commission maintains its conclusion that the information about the manifestation of a disease or disorder in an employee's child can more easily lead to genetic discrimination against an employee than information about an employee's spouse. Even where the information provided concerns an adopted child, it is unlikely that a wellness program will know whether the child is biological or adopted, and the information may therefore be used to make predictions about an employee's health. Consequently, the final rule provides that no inducements are permitted in return for information about the manifestation of disease or disorder of an employee's children and makes no distinction between adult and minor children or between biological and adopted children.

The fact that the final rule treats health information about spouses and children differently with respect to wellness program inducements, however, does not alter the statutory definition of family member, which includes both spouses and children. Nor does the distinction, as suggested by some commenters, mean that employers are prohibited from offering health or genetic services (including participation in an employer-sponsored wellness program) to an employee's children on a voluntary basis. They may do so, but may not offer any inducement in exchange for information about the manifestation of any disease or disorder in the child.[29]

The Commission agrees with commenters who suggested that the final rule should clarify that the prohibition on inducements applies to adult children. The possibility that information about a child could be used to discriminate against an employee on the basis of genetic information is not diminished by the age of the child whose information is provided. Therefore, the rule does not distinguish between minor children and those 18 years of age and older, and makes explicit that the prohibition extends to adult children. This clarification is being made to 29 CFR 1635.8(b)(2)(A)(iii).

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[26] *See* 42 U.S.C. 2000ff–1(a), 2000ff–2(a), 2000ff–3(a), 2000ff–4(a); 29 CFR 1635.4.

[27] *See* 42 U.S.C. 2000ff–8(c); 29 CFR 1635.7.

[28] Prior EEOC interpretations set forth in the 2010 final rule implementing Title II of GINA, Regulations Under the Genetic Information Nondiscrimination Act of 2007, 75 FR 68912 (Nov. 9, 2010) (codified at 29 CFR part 1635), and the proposed rule on GINA and employer-sponsored wellness programs, Genetic Information Nondiscrimination Act, 80 FR 66853 (proposed Oct. 30, 2015) (to be codified at 29 CFR part 1635), may be considered in determining whether inducements provided prior to this applicability date for an employee's spouse or other dependents to provide information about their manifested diseases or disorders as part of an employer-sponsored wellness program comply with GINA.

[29] *See* 29 CFR 1635.8(b)(2)(A)(iii).

Confidentiality Protections

The Commission received numerous comments from individuals and advocacy groups asking that we strengthen the confidentiality protections of the rule, especially given that the availability of inducements in return for certain genetic information would likely mean that more genetic information will end up in the hands of employer-sponsored wellness programs. Commenters questioned how employer-sponsored wellness programs would use the information, to whom they would disclose and/or sell it, and how they would ensure that it remained confidential. One commenter further noted that many people erroneously assume that the privacy protections of HIPAA apply to all employer-sponsored wellness programs and therefore "may let their privacy guard down." Some of these commenters provided specific examples of ways in which employer-sponsored wellness programs were not maintaining, or might not maintain in the future, the confidentiality of genetic information in their possession—pointing to, for example, advances in technology that allow for the re-identification and de-aggregation of unidentifiable and aggregate data that some employer-sponsored wellness programs are taking or might take advantage of—and/or made specific suggestions on how GINA's confidentiality protections could be improved. These suggestions included, among other ideas: Adding a requirement that individuals have the right to receive copies of all personal information collected about them as part of an employer-sponsored wellness program, to challenge the accuracy and completeness of that information, and to obtain a list of parties with whom that information was shared and a description of the compensation or consideration received for that disclosure; providing that covered entities are strictly liable for any confidentiality breaches and are not permitted to disclaim liability for harms that result from sharing data; requiring wellness programs to delete all genetic information obtained about an individual participating in the employer-sponsored wellness program if that individual stops participating and requests that his or her genetic information be deleted; and prohibiting the storage of individually identifiable information obtained by the wellness program on work computers, servers, or paper files. Another commenter noted that the rule should include confidentiality protections for health information provided by spouses who do not want that information to fall into the hands of the employee, due, for example, to domestic violence.

In response, the Commission notes that Title II of GINA and the existing regulations implementing it include specific confidentiality provisions which require employers and other covered entities that possess genetic information to maintain it in medical files (including where the information exists in electronic forms or files) that are separate from personnel files and treat such information as a confidential medical record. These provisions prohibit the disclosure of genetic information except in six very limited circumstances.[30] The provision which allows employers to acquire genetic information as part of health or genetic services such as employer-sponsored wellness programs further requires that the authorization an individual must sign explain the restrictions on the disclosure of that information; that individually identifiable genetic information is provided only to the individual receiving the services and the licensed health care professionals or board certified genetic counselors involved in providing those services; and that any individually identifiable genetic information is only available for purposes of the health or genetic services and is not disclosed to the employer except in aggregate terms.[31] The Commission intends to continue its vigorous enforcement of these requirements and believes that they already provide strong protections against unlawful disclosure of genetic information provided as part of employer-sponsored wellness programs.[32] Some of the ideas offered by advocacy groups as best practices, such as giving individuals the right to receive copies of genetic information collected about them, are already requirements of the regulation.[33] Although others may make sense as best practices, such as allowing an individual to challenge the accuracy of genetic information within the employer's possession, the Commission does not believe it is necessary to add to the already stringent confidentiality requirements that exist in the regulations.

Tobacco Cessation

Several commenters asked that the Commission clarify its position on GINA's application to tobacco-related employer-sponsored wellness programs, such as smoking cessation programs. In response, we reaffirm that the inducement rules in § 1635.8(b)(2) apply only to health and genetic services that request genetic information. An employer-sponsored wellness program does not request genetic information when it asks the spouse of an employee whether he or she uses tobacco or ceased using tobacco upon completion of a wellness program or when it requires a spouse to take a blood test to determine nicotine levels, as these are not requests for information about the spouse's manifestation of disease or disorder.

Burden

One commenter asserted that the EEOC underestimated the burden the proposed rule would impose on employers, arguing that the rule was an economically significant one that would have an annual effect on the economy of $100 million or more. Among other things, the commenter argued that the EEOC underestimated training, compliance review, and program revision costs; failed to include "familiarization" costs; and failed to provide necessary empirical support for various conclusions. We disagree.

The proposed rule appropriately estimated the training cost by using wage data from the Bureau of Labor Statistics indicating a median $49.41 per hour wage for human resource management professionals.[34] Although the commenter argues that this rate should be tripled to reflect "fully loaded" hourly rates paid by the government to private contractors for professional labor, actual hourly wages of human resource professionals better estimate the economic costs of training. The fully loaded hourly rate inappropriately includes coverage of the private contractor's fixed costs and, as a result, will erroneously bias the estimated economic impact. Costs such as a private contractor's office rent and marketing budget are not an economic impact of the regulation. As such, the estimate of the marginal economic impact of the regulation excludes firms' fixed costs because those costs are incurred whether or not the GINA regulation is revised. Moreover, in most cases, a covered entity's compliance effort will be conducted by its own human resource management professionals. The median wage of human resource management professionals therefore reasonably estimates the economic impact of up to three person-hours of staff time. The EEOC's estimates of three human resource professionals per covered entity and one hour per person are cautious and reflect agency experience and expertise.

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[30] *See* 42 U.S.C. 2000ff–5; 29 CFR 1635.9.

[31] *See* 42 U.S.C. 2000ff–1(b)(2), 2000ff–2(b)(2), 2000ff–3(b)(2), 2000ff–4(b)(2); 29 CFR 1635.8(b)(2)(i).

[32] Nothing in this rule is intended to affect the ability of a health oversight agency to receive data under HIPAA. *See* 45 CFR 164.501 and 164.512(d).

[33] *See* 29 CFR 1635.9(b)(1).

[34] The EEOC estimated that a covered entity will train three human resource management professionals, for one hour each. The estimated cost was $49.41 per person and $148.23 per covered entity.

In response to the commenter's argument that the projected costs should have included the hiring of a private contractor to provide training, we reiterate that human resource professionals will be able to learn what is necessary for compliance with the rule by reading the EEOC's freely provided technical assistance documents, or participating in our general or GINA-specific outreach programs, many of which are free.

Although the commenter asserts that "great effort" will be expended by entities that are not covered by Title II of GINA in reading the rule to ensure that they are not covered and that these costs should be included, the proposed regulation does not alter long established coverage requirements of Title II of GINA, and it is unlikely that entities that have never before concerned themselves with compliance with this and other workplace nondiscrimination laws will now undergo "great effort" to ensure that the changes in this rule do not apply to them.

Finally, we note that the final rule does not require any changes to employer-sponsored wellness programs that are already in compliance with Title II of GINA and its existing implementing regulations. Instead, this rule merely clarifies that offering limited inducements to spouses is permitted in certain circumstances.

We, therefore, reiterate our conclusion that the rule will not have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local or tribal governments or communities.

Comments Responding to Questions in the NPRM

One commenter argued that the Commission could not take any action on issues described only in the portion of the NPRM that asked questions because the mere posing of a question does not provide the regulated community with sufficient information to adequately assess the impact of any eventual proposal as required by the Administrative Procedure Act (APA). We note, however, that notice is sufficient under the APA when the final rule "follow[s] logically" from the notice so that "interested parties [are allowed] a fair opportunity to comment" upon what becomes the final rule.[35] The NPRM described the "subjects and issues involved" as required by the APA.[36] The fact that the EEOC did receive comments on all seven of the "subjects and issues" raised in the questions demonstrates that the notice was adequate.[37]

Certification in Lieu of Spouse Providing Information About Manifestation of Disease or Disorder

Individuals, including individuals with disabilities and their advocates, as well as one insurance company and one industry group, commented that spouses should be allowed to provide a certification from a medical professional stating that the spouse is under the care of a physician and that any medical risks identified by that physician are under active treatment, instead of being required to answer questions about manifested diseases or disorders. By contrast, most of the health insurance issuers, industry groups, and employer groups that commented argued that allowing a spouse to receive the same inducement for completing such a certification would circumvent the ability of an employer-sponsored wellness program to assess and mitigate health risks. Several industry groups also pointed out that this alternative was not necessary because the tri-Department wellness regulations already provide a waiver standard that is sufficient to ensure individuals can earn full inducements even if an impairment makes it difficult to meet the requirements of a health-contingent wellness program.

The Commission has decided that although some spouses may already be aware of their particular risk factors, a general certification or attestation that they are receiving medical care for those risks would limit the effectiveness of employer-sponsored wellness programs that the Affordable Care Act intended to promote. For example, employers may use aggregate information from HRAs to determine the prevalence of certain conditions in their workforce and in the families of their workforce for the purpose of designing specific programs aimed at improving the health of employees and spouses with those conditions.[38] The Commission concludes that protections in the final rule—such as the requirement that employer-sponsored wellness programs that collect genetic information be reasonably designed to promote health and prevent disease and the existing confidentiality requirements—provide spouses with significant protections without adopting a medical certification as an alternative to providing information about the manifestation of disease or disorder.

Applying Authorization Requirements Only to Employer-Sponsored Wellness Programs That Offer More Than De Minimis Inducements for Information About Spouses' Manifestation of Disease or Disorder

Most of the individuals and advocacy groups who commented on this issue argued that the authorization requirements should apply to all employer-sponsored wellness programs, regardless of the level of inducement offered, in order to provide appropriate protections for genetic information. Some of these commenters noted that employers have ways to pressure employees to participate in wellness programs that have nothing to do with inducements, and others noted that any ambiguity in the definition of "de minimis" could lead to failure to obtain authorization even when significant inducements are offered. Although one health insurance company asserted that the authorization rule should apply to all employer-sponsored wellness programs due to the administrative complications that different standards would cause, most health insurance companies, as well as the employer associations and industry groups that commented on this issue, went beyond asserting that there should be a de minimis exception to the authorization rules and argued for more significant revisions to the proposed rule. For example, some argued that the EEOC has no statutory authority to impose a requirement that employers obtain authorization from spouses, others argued that asking a spouse about his or her own health was not genetic information and, therefore, not subject to GINA at all, others argued that a de minimis exception should apply to all of the requirements of the proposed rule, and still others argued that the EEOC should consider whether the authorization requirement in general serves any purpose, given that a family's decision to participate in an employer-sponsored wellness program should be sufficient confirmation of voluntariness.

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[35] *See Conn. Light & Power* v. *Nuclear Regulatory Comm'n.*, 673 F.2d 525, 533 (D.C. Cir. 1982).

[36] "The Administrative Procedure Act requires an agency engaged in informal rule-making to publish a notice of proposed rule-making in the **Federal Register** that includes 'either the terms or substance of the proposed rule or a description of the subjects and issues involved.'" *See id.* at 530 (quoting the APA, 5 U.S.C. 553(b)(3)).

[37] "The purpose of the comment period is to allow interested members of the public to communicate information, concerns, and criticisms to the agency during the rule-making process." *Id.; see also City of Stoughton* v. *EPA,* 858 F.2d 747, 753 (D.C. Cir. 1988) (holding that petitioner could not challenge sufficiency of notice when petitioner had submitted comments on the issue that petitioner claimed was inadequately noticed).

[38] *See, e.g.,* RAND Health, *Workplace Wellness Programs Study Final Report,* 101 (2013), *http://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR254/RAND_RR254.pdf* [hereinafter *RAND Final Report*].

We decline to exclude programs that offer de minimis inducements from the authorization requirement of the rule. Although commenters gave examples of some inducements that might be considered de minimis, no commenters offered a workable principle that could be used as the basis for defining which inducements are de minimis and which are not. We suspect that employers' interpretation of the term would vary, and there is no clear basis on which to establish a threshold for the de minimis value. We have responded to arguments that the authorization requirement of the rule be eliminated for various reasons in the in-depth discussion of the authorization provision, below. (See *Comments Regarding Specific Provisions: Authorization for Collection of Genetic Information*).

Best Practices or Procedural Safeguards To Ensure Employer-Sponsored Wellness Programs Are Designed To Promote Health or Prevent Disease and Do Not Operate To Shift Costs

Individuals and advocacy groups responded to this question with the same suggestions they made for strengthening the definition of employer-sponsored wellness programs that are "reasonably designed to promote health or prevent disease," discussed below, raising ideas such as requiring that employer-sponsored wellness programs be based on scientifically valid evidence or that they include due process protections for individuals who claim rules are unfairly applied to them. Health insurance issuers, employer associations, and industry groups similarly reasserted the objections they raised in response to the proposed rule's suggestion that a "reasonably designed" standard be adopted, arguing that existing HIPAA, Affordable Care Act, and GINA protections are sufficient to protect against discrimination and unlawful disclosures of genetic information. Some also expressed frustration with the very idea that employer-sponsored wellness programs might operate to shift costs in a discriminatory way. The final rule will not adopt additional protections to safeguard spousal information or prevent cost-shifting, because existing protections are sufficient. We will, however, discuss these issues in more detail below, given that they essentially reiterate comments received in response to the proposal to adopt a "reasonably designed" standard. (See *Comments Regarding Specific Provisions: Health or Genetic Services Must Be Reasonably Designed*).

More Specific Guidance and Procedures on Confidentiality Requirements for Electronically Stored Records

Several commenters urged the EEOC to convene expert stakeholder groups or hold public meetings to determine what guidance should be offered to employers on how to protect electronically stored data. Some commented that the EEOC should require specific protocols to maximize the safety of electronically stored genetic information without providing specifics; others provided suggested restrictions or referred to security standards such as those being developed by the Precision Medicine Initiative or those that already exist under the HIPAA Privacy and Security Rules (some arguing that HIPAA's existing standard already sufficiently restricts employer-provided wellness programs and others arguing that rules identical to those under HIPAA should be specifically applied to all employer-provided wellness programs). Others argued that since it is unclear whether certain kinds of genetic information can ever be stored in a way that prevents re-identification, employers should not be permitted to store such data (*e.g.*, molecular genetic data).

The goal of the confidentiality and disclosure rules of GINA is to protect genetic information as required by the statute whether that information is in paper or electronic format. As noted above, the regulations already have specific confidentiality provisions that require employers and other covered entities that possess genetic information to maintain it in medical files (including where the information exists in electronic forms or files) that are separate from personnel files, and treat such information as a confidential medical record. These provisions prohibit the disclosure of genetic information except in six very limited circumstances.[39] The provision that allows employers to acquire genetic information as part of health or genetic services such as wellness programs further requires that the authorization form the employer must provide to an individual to sign before providing genetic information as part of health or genetic services must explain the restrictions on the disclosure of that information. Specifically, the authorization must explain that individually identifiable genetic information is provided only to the individual receiving the services and the licensed health care professionals or board certified genetic counselors involved in providing those services; and that any individually identifiable genetic information is only available for purposes of the health or genetic services and is not disclosed to the employer except in aggregate terms.[40] Although we do not believe that it is necessary to adopt additional protections for electronically stored data, we believe there are certain best practices that employers may want to consider in terms of safeguarding all genetic information in their possession.[41]

Best Practices or Procedural Safeguards To Ensure That Information About Spouses' Manifested Diseases or Disorders Is Protected From Disclosure

Those who commented on this question raised points quite similar to those raised about ensuring the confidentiality of electronically stored data, which are discussed above. Health insurance issuers, employer associations, and industry groups asserted that existing HIPAA privacy and security requirements, along with GINA's existing rules, were sufficient, while advocacy groups provided ideas for strengthening applicable confidentiality requirements. We reiterate that we do not believe that additional protections are needed, given GINA's requirements that genetic information be kept confidential and disclosed in only six limited circumstances, but urge employers to consider adopting best practices such as those set forth in the appendix accompanying the ADA Final Rule, issued today. Such practices include adoption and communication of strong privacy policies, training for individuals who handle confidential medical information, encryption of electronic files, and policies that require prompt notification of employees whose information is compromised if data breaches occur.

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[39] *See* 42 U.S.C. 2000ff–5(b); 29 CFR 1635.9.

[40] *See* 29 CFR 1635.8(b)(2)(i).

[41] *See, e.g.*, 29 CFR part 1630 app. 1630.14(d)(4)(i) through (iv): Confidentiality, which describes best practices such as ensuring that individuals who handle medical information (in this case, genetic information) that is part of an employee health program are not responsible for making decisions related to employment, and that breaches of confidentiality are reported to affected employees immediately and thoroughly investigated.

Restriction on the Collection of Genetic Information to Only the Minimum Necessary to Directly Support the Specific Wellness Activities and Prohibition on Accessing Genetic Information From Other Sources

Individuals and advocacy groups argued that the collection of genetic information by employer-sponsored wellness programs should be restricted to the minimum necessary to directly support specific wellness activities and interventions. Many of these commenters also urged the EEOC to prohibit employer-sponsored wellness programs from obtaining genetic information from sources other than voluntarily submitted health risk assessments and biometric screenings, such as patient claims data or medical records data. Taking the opposite view, health insurance issuers, employer associations, and industry groups argued against adopting any further restrictions on employer-sponsored wellness programs. Some asserted that information from sources such as claims data and medical records assists in the development of effective employer-sponsored wellness programs and that restricting access to it would impede the design and success of the programs. These commenters also pointed out that when an employer-sponsored wellness program is offered as part of a health plan, it may work more optimally to allow that program to quickly identify people in need of services by using claims data already being received by the administrator of the health plan. These and other commenters noted that no additional restrictions were needed because the existing frameworks of the ADA and GINA adequately limit the information that may be collected as part of an employer-sponsored wellness program, while others said that existing tri-Department wellness rules requiring "reasonable design" ensure that programs are nondiscriminatory. Several of these commenters also noted that any additional restrictions would unnecessarily stifle innovation in the design and implementation of employer-sponsored wellness programs.

The final rule will not include a specific restriction on the collection of genetic information to only the minimum necessary to directly support specific employer-sponsored wellness program activities or a limitation on accessing genetic information from other sources. The Commission believes that the protections in the final rule—such as the requirement that employer-sponsored wellness programs that collect genetic information be reasonably designed to promote health and prevent disease and the existing confidentiality requirements—provide significant protections for employees and spouses without adopting further restrictions or limitations. (See *Comments Regarding Specific Provisions: Health or Genetic Services Must Be Reasonably Designed*).

Employer-Sponsored Wellness Programs Offered Outside of Employer-Sponsored Group Health Plans

Numerous comments offering a broad range of opinions were submitted in response to the question in the NPRM asking whether employers offer or are likely to offer wellness programs outside of a group health plan or group health insurance coverage that use inducements to encourage employees' spouses to provide information about current or past health status as part of a HRA, and the extent to which the GINA regulations should allow inducements provided as part of such programs. Some commenters stated many employers already offer wellness programs that are outside group health plans, while others pointed out that employer-sponsored wellness programs that offer medical care are group health programs in themselves. Some argued that the final rule should apply both to wellness programs that are part of an employer-sponsored health plan and to wellness programs offered by employers outside such plans, while others asked the EEOC to clarify what it means for a wellness program "to be part of, or provided by, a group health plan." Others argued against applying the final rule to programs offered by employers that operate outside group health plans (thereby either allowing these programs to impose higher inducements in return for genetic information or, in the opinion of one advocacy group, meaning that these programs would be prohibited from offering inducements for genetic information at all). One employer association asserted that many of its members offer inducements for HRAs only under employer-sponsored wellness programs that are part of a larger group health plan, but that the breadth of the tri-Department's wellness program rules has the effect of applying at least some nondiscrimination requirements to nearly all wellness programs. That commenter concluded that it would be a better use of the EEOC's time to work on the alignment of Title II of GINA with the Affordable Care Act, rather than focusing on this issue. One industry group indicated that the proposed rule failed to provide guidance for stand-alone wellness programs and argued that anything less than the 30 percent maximum incentive standard would conflict with the Affordable Care Act.

Rather than listing factors for determining whether an employer-sponsored wellness program is part of, or outside of, an employer-sponsored group health plan, the Commission has decided that all of the provisions in this rule apply to all employer-sponsored wellness programs that request genetic information. This means that this rule applies to employer-sponsored wellness programs that are: Offered only to spouses of employees enrolled in an employer-sponsored group health plan; offered to spouses of all employees regardless of whether the employee or spouse is enrolled in such a plan; or offered as a benefit of employment to spouses of employees of employers who do not sponsor a group health plan or group health insurance.

We considered taking the position that employer-sponsored wellness programs that are not offered through a group health plan and that request information about the manifestation of disease or disorder from spouses could not offer any inducements. However, having concluded that some level of inducement is consistent with other requirements of 29 CFR 1635.8(b)(2), including the requirement that the employer-sponsored wellness program be "voluntary," where the wellness program is part of a group health plan, there seemed to be no basis for reaching a contrary conclusion with respect to employer-sponsored wellness programs that are outside of a group health plan. At the same time, allowing unlimited inducements where an employer-sponsored wellness program is not offered through a group health plan would be inconsistent with our position that limitations on spousal inducements are necessary to promote GINA's interest in limiting access to genetic information and ensuring that inducements are not so high as to be coercive. Accordingly, as noted below, this rule explains how to calculate the permissible inducement level for employer-sponsored wellness programs regardless of whether they are related to a group health plan.

Comments Regarding Specific Provisions

Section 1635.8(b)(2)(i)(A) Health or Genetic Services Must Be Reasonably Designed

The NPRM proposed that employers may request, require, or purchase genetic information as part of health or genetic services only when those services, including any acquisition of genetic information that is part of those services, are reasonably designed to promote health or prevent disease. Many commenters, including health insurance issuers, employer associations, industry groups, and a Congressional committee, urged the EEOC to strike this requirement, noting that it was beyond the EEOC's authority under GINA to impose a reasonable design requirement on health and genetic services and that the EEOC should leave it to the tri-Departments to determine what constitutes a reasonably designed employer-sponsored wellness program. Some of these commenters further noted that the proposed requirement was confusing because even though it sounded very similar, or even identical, to the corresponding requirement in the Affordable Care Act, it seemed to mean something different. They urged the Commission to delete the examples in the preamble and instead make clear that, as with the Affordable Care Act, satisfaction of the reasonable design standard is based on all facts and circumstances. Several of these commenters made specific mention of the preamble's example of a HRA that would not meet the "reasonably designed" standard—one that collected information without providing follow-up information or advice—arguing that this conclusion did not conform to the Affordable Care Act's definition and that it is not always appropriate to provide follow-up information. Some further argued that if the Commission was going to rely on examples to explain the standard, it should put the examples in the regulation itself and make them more detailed.

Individuals and advocacy groups, on the other hand, argued that the new standard was not sufficiently rigorous and that it should be based on clinical guidelines or national standards, or that there should be a stronger connection between the content of a HRA and the development of specific disease management programs. Some argued, for example, for a requirement that employer-sponsored wellness programs collect no more than the minimum necessary information from spouses directly linked to specific program services in order to meet the "reasonably designed" standard and/or that employer-sponsored wellness programs be required to provide scientific evidence that demonstrates that the program improves health or prevents disease. Others noted that the standard as described has virtually no meaning and will allow employers to decide for themselves what is "reasonable."

The final rule acknowledges that satisfaction of the "reasonably designed" standard must be determined by examining all of the relevant facts and circumstances and otherwise retains the requirement in the NPRM that employers may request, require, or purchase genetic information as part of health or genetic services only when those services, including any acquisition of genetic information that is part of those services, are reasonably designed to promote health or prevent disease. As noted in the NPRM, in order to meet this standard, the program must have a reasonable chance of improving the health of, or preventing disease in, participating individuals, and must not be overly burdensome, a subterfuge for violating Title II of GINA or other laws prohibiting employment discrimination, or highly suspect in the method chosen to promote health or prevent disease. The examples in the preamble to the proposed rule were intended simply to illustrate how this standard works. We now clarify, in agreement with several comments about one of these examples, that programs consisting of a measurement, test, screening, or collection of health-related information without providing results, follow-up information, or advice designed to improve the participant's health would not be reasonably designed to promote health or prevent disease, unless the collected information actually is used to design a program that addresses at least a subset of conditions identified. Additionally, we would consider a program to not be reasonably designed to promote health or prevent disease if it imposes, as a condition of obtaining a reward, an overly burdensome amount of time for participation, requires unreasonably intrusive procedures, or places significant costs related to medical examinations on employees. We also would not consider a program to be reasonably designed to promote health or prevent disease if it exists merely to shift costs from the covered entity to targeted employees based on their health or if the employer is only using the program for data collection or to try to determine its future health costs. Additionally, under these rules, an employer-sponsored wellness program is not reasonably designed if it penalizes an employee because a spouse's manifestation of disease or disorder prevents or inhibits the spouse from participating or from achieving a certain health outcome. For example, an employer may not deny an employee an inducement for participation of either the employee or the spouse in an employer-sponsored wellness program because the employee's spouse has blood pressure, a cholesterol level, or a blood glucose level that the employer considers too high.

The Commission believes that because the requirement that an employer-sponsored wellness program be "reasonably designed to promote health or prevent disease" is a standard with which health plans are now sufficiently familiar, it is reasonable to apply that standard under GINA to employers that sponsor wellness programs. For consistency, this same requirement, with the same examples, has recently been adopted under the ADA.[42] Although the standard is less stringent than some commenters would prefer, the Commission believes it provides a sufficient level of protection against the misuse of employee genetic information while providing a degree of flexibility in designing wellness programs.

Section 1635.8(b)(2)(iii)

When an Inducement May Be Offered

As noted in the general comments section, above, numerous individuals and advocacy groups urged the Commission to abandon the position set forth in the proposed rule that employers may offer limited inducements when a spouse who receives genetic services offered by an employer provides information about his or her current or past health status information as part of a HRA. These commenters, as well as some members of Congress, argued that the absolute prohibition on financial inducements set forth in the existing GINA regulations should be reaffirmed, arguing that allowing employer-sponsored wellness programs to offer inducements in exchange for spouses to provide information about their current or past health status would be coercive and would substantially weaken GINA's protections. Several industry and employer groups, on the other hand, expressed support for the proposed rule's clarification that GINA does not preclude inducements for spouses for completion of HRAs when the requirements of § 1635.8(b)(2)(i) were met, while expressing deep dissatisfaction with the limitations on those inducements. As noted above, one industry group argued that use of the phrase "current or past health status" in describing the types of questions to spouses that could include inducements was confusing because not all information about a spouse's current or past health status meets the definition of genetic information. For example, some might consider questions about height, weight, and exercise regimes to be questions about "current health status," although such questions asked of an employee's spouse are not requests for genetic information under GINA.

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[42] *See* 29 CFR 1630.14(d)(1); published elsewhere in this issue of the **Federal Register**.

The Commission retains the NPRM's requirements that, consistent with the requirements of § 1635.8(b)(2)(i) and (ii), a covered entity may offer an inducement to an employee whose spouse provides information about the spouse's own current or past health status as part of a HRA. In order to clarify that the rule only applies to questions asked of the spouse that meet the definition of genetic information, the final rule will replace the phrase "current or past health status" with "manifestation of disease or disorder." Moreover, as discussed in detail above, because the final rule will apply not only to employer-sponsored wellness programs that are part of group health plans, but to all wellness programs offered by employers, the language of the final rule at § 1635.8(b)(2)(iii) will be revised to eliminate references to the employer's health plan. (See *Comments Responding to Questions: Wellness Programs Offered Outside of Employer-Sponsored Group Health Plans.*) The final rule will also explain how inducement limits are to be calculated in situations where participation in an employer-sponsored wellness program does not depend on enrollment in a particular group health plan, and in situations where an employer does not offer a group health plan but still wants to offer inducements for employees and their spouses to participate in wellness programs. Finally, the final rule retains the requirement that no inducement may be offered in return for the spouse providing his or her own genetic information, including results of his or her genetic tests, as well as the prohibition on providing inducements in return for health information about an employee's children.[43] (See *General Comments: Prohibition on Inducements for Information From Children of Employees.*)

Level of Inducement That May Be Offered

The Commission received numerous comments on this provision of the proposed rule. As stated in the general comments section of this preamble, individuals and health advocacy groups said that the proposed rule was based on the erroneous assumption that the GINA rule must be "conformed" to provisions of the Affordable Care Act concerning employer-sponsored wellness programs. These and other commenters, including some members of Congress, commented that allowing employer-sponsored wellness programs to offer inducements up to 30 percent in exchange for spouses to provide information about their current or past health status would be coercive and would substantially weaken GINA's protection and urged the Commission to strike this proposal and reaffirm that inducements are not permitted in return for genetic information. Other advocacy groups argued that allowing inducements for spousal information would lead to conflict within families, worsening the mental and physical health of family members when, for example, an employee and spouse disagree about whether the spouse will provide the information needed to obtain a reward or avoid a penalty. One commenter noted that a rule that permits employers to increase the amount an employee pays for health insurance by as much as 30 percent of the total cost of coverage if the employee or the employee's spouse fails to provide certain health information would lead some to forego employer-provided health insurance and thus increase the pool of families without "good" health insurance coverage. Employer and industry groups, however, commented that the EEOC should align the inducement limits for employer-sponsored wellness programs with the inducement limits established in the tri-Department wellness regulations. One industry group asserted that requests to an individual for information about his or her own past or current health status is not genetic information (except for genetic test results) and that the EEOC therefore did not have authority under GINA to adopt requirements with respect to inducements for this information. Another industry group, after expressing strong disapproval of the proposed rule's inducement limitation, went on to provide suggestions for improving the description of that limitation if the Commission were to adopt it, suggesting, for example, that certain provisions in the regulatory language be moved. Although some of these commenters appreciated that the proposed rule based the inducement limit on the total cost of coverage for the plan in which the employee and any dependents are enrolled, employer associations and industry groups generally asserted that the inducement limits should conform to those established by the tri-Department wellness regulations, particularly the lack of incentive limits on participatory programs.

Most individuals and advocacy groups that submitted comments did not comment on the proposed rule's discussion of how inducements should be apportioned. Two groups that did comment indicated their support for the idea, assuming that the EEOC was going to move forward with the proposal to allow inducements. In contrast, numerous health insurance issuers, employer associations, industry groups, as well as a Congressional committee and various United States Senators, commented that the apportionment rule should be eliminated, arguing that it was administratively complicated and/or that it conflicts with the tri-Departments' wellness regulations, which does not require apportionment. Many of these commenters also pointed out that the apportionment rule conflicts with the general practice of providing an equal inducement to an employee and a spouse when both participate in an employer-sponsored wellness program and that encouraging a larger inducement for spouses was arbitrary, implied that the spouse's achievement of a health goal is more valuable than the employee's equal accomplishment, and/or conflicted with the idea of a reasonably designed wellness program. One group requested that, if the EEOC were to move forward with apportionment rules, the rule clarify that the amount of the inducement attributable to the spouse does not have to be paid directly to the spouse but, instead, could be paid as part of a premium reduction or in any other way that the other portion of the inducement was being paid.

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[43] 29 CFR 1635.8(b)(2)(i)(B). Title I of GINA specifically prohibits a group health plan and a health insurance issuer in the group or individual market from collecting (including requesting, requiring or purchasing) genetic information prior to or in connection with enrollment in health coverage or for underwriting purposes. *See* 26 CFR 54.9802–3T(b), (d); 29 CFR 2590.702–1(b), (d); 45 CFR 146.122(b), (d); 45 CFR 147.110; 45 CFR 148.180(b), (d). "Underwriting purposes" includes rules for eligibility for benefits and the computation of premium or contribution amounts under the plan or coverage including any discounts, rebates, payments in kind, or other premium differential mechanisms in return for activities such as completing a HRA or participating in a wellness program. *See* 26 CFR 54.9802–3T(d)(1)(ii); 29 CFR 2590.702–1(d)(1)(ii); 45 CFR 146.122(d)(1)(ii); 45 CFR 148.180(f)(1)(ii). Consequently, employer-sponsored wellness programs that provide rewards for completing HRAs that request a plan participant's genetic information, including family medical history, violate the prohibition against requesting genetic information for underwriting purposes, regardless of whether the plan participant provides authorization. Under Title I of GINA, a group health plan and a health insurance issuer in the group or individual market may request genetic information through a HRA as long as the request is not in connection with enrollment and no rewards are provided.

The Commission agrees that the proposed rule's apportionment standards, which would have permitted a larger inducement to the spouse for providing similar information to that which the employee provided, is overly complicated and sends the wrong message about the value of employer-sponsored wellness programs for each participating individual. Moreover, we determined, in developing the final ADA rule on employer-sponsored wellness programs, that incentives in excess of 30 percent of the cost of self-only coverage offered in exchange for an employee answering disability-related questions or taking medical examinations as part of a wellness program would be coercive. We see no reason for adopting a different threshold where the employee's spouse is the individual whose health information is being sought. Consequently, this final rule states that when an employee and the employee's spouse are given the opportunity to enroll in an employer-sponsored wellness program, the inducement to each may not exceed 30 percent of the total cost of (1) self-only coverage under the group health plan in which the employee is enrolled (including both employee and employer cost), if enrollment in the plan is a condition for participation in the wellness program; (2) self-only coverage under the group health plan offered by the employer (including both employee and employer cost), where the employer offers a single group health plan, but participation in a wellness program does not depend on the employee's or spouse's enrollment in that plan; (3) the lowest cost self-only coverage under a major medical group health plan offered by the employer (including both employee and employer cost), where the employer has more than one group health plan, but enrollment in a particular plan is not a condition for participating in the wellness program; or (4) the second lowest cost Silver Plan[44] available on the Exchange in the location that the employer identifies as its principal place of business if the employer offers no group health plan. In this last instance, the maximum inducement to the employee and the spouse is equal to 30 percent of the cost of covering an individual who is a 40-year-old non-smoker. Thus, the amount of the inducement available to the spouse cannot exceed the amount an employer may offer to an employee, under the ADA, to participate in a wellness program that includes disability-related questions or a medical examination.

The final rule includes examples explaining how the inducement limits are to be calculated. For example, if an employee is enrolled in a group health plan through the employer at a total cost (taking into account both employer and employee contributions towards the cost of coverage) of $14,000 for family coverage, that plan has a self-only option for a total cost of $6,000, and the employer provides the option of participating in a wellness program to the employee and spouse if they participate in the plan, the employer may not offer more than $1,800 to the employee and $1,800 to the spouse. If participation in a particular group health plan is not required for the employee and spouse to earn an inducement and the employer has only one group health plan under which self-only coverage costs $7,000, the employee and the spouse can each get an inducement of up to $2,100. If participation in a particular group health plan is not required for the employee and the spouse to earn an inducement and the employer has more than one group health plan and self-only coverage under the major medical group health plans range in cost from $5,000 to $8,000, the employee and spouse can each get an inducement of up to $1,500. Finally, if the employer offers no group health plan at all and the second lowest-cost Silver Plan available through the state or federal health care Exchange established under the Affordable Care Act in the location that the employer identifies as its principal place of business would cost a 40-year-old non-smoker $4,000, the maximum inducement the employer could offer the employee and the spouse would be no more than $1,200 each to answer questions about their current health or to take a medical examination as part of a wellness program.

As noted in the ADA final rule, the Commission has concluded that the employer's lowest total cost self-only coverage under a major medical group health plan is an appropriate benchmark for establishing the inducement limit where an employer has more than one group health plan and participation in an employer-sponsored wellness program does not depend on enrollment in any particular plan for two reasons. First, it offers employers predictability and administrative efficiency in complying with the rule. Second, the rule is consistent with the Commission's objective of ensuring that inducements in return for a spouse providing information about his or her manifestation of disease or disorder are not coercive.

The second lowest cost Silver Plan available on the Exchange in the location that the employer identifies as its principal place of business is used as a benchmark for determining the amount of an eligible individual's premium tax credit for purchasing health insurance on the Exchange.[45] This is the most popular plan on the Exchanges, and information about its costs for individuals who are 40 years old and non-smokers is available to the public.[46] Additionally, because the Silver Plan typically is neither the least nor the most expensive plan available on the Exchanges, inducement limits that are tied to its costs may promote participation in wellness programs while not being so high as to be coercive.

Revisions will be made to § 1635.8(b)(2)(iii) to correspond to these changes. We also clarify that the portion of the inducement attributable to the spouse's provision of information about his or her manifestation of disease or disorder need not be paid directly to the spouse, but may be paid in whatever way the remaining portion of the inducement is made such as, for example, as part of a reduction in premium.

Authorization for Collection of Genetic Information

Although numerous health and other advocacy groups agreed that authorization is a much needed component of employer-sponsored wellness programs that collect genetic information, they went on to argue that the authorization requirements of GINA should be strengthened. Some noted that the authorization forms currently in use by wellness vendors tend to use arcane language, are insufficiently understood, and/or on occasion are hidden in obscure links that few people read. Others suggested that in order to truly ensure that participation in an employer-sponsored wellness program that collects genetic information is voluntary, authorization requirements should allow a participant who indicates that his or her participation is not voluntary to obtain the reward or avoid the penalty even if his or her spouse does not provide the requested information. Several advocacy groups suggested that the Commission provide model authorization forms and notices. While some health insurance issuers and industry groups agreed that the Commission should provide model language that would satisfy the authorization requirements, these commenters, as well as employer groups, generally urged the Commission to strike or limit the authorization requirement. Some argued that the Commission did not have the authority to require spouses to provide authorization because the statutory language requires that prior, knowing, written, and voluntary authorization be provided by the employee, not by other individuals. Others noted that requiring multiple authorization forms would unduly complicate the operation of employer-sponsored wellness programs and that a single authorization completed by the employee should be sufficient.

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[44] There are four "metal" categories of health plans in the Exchanges established under the Affordable Care Act: Bronze, Silver, Gold, and Platinum. *See How To Pick a Health Insurance Plan: The "Metal Categories", Healthcare.gov, https://www.healthcare.gov/choose-a-plan/plans-categories* (last visited March 29, 2016).

[45] *See* 26 U.S.C. 36B(b)(2).

[46] *See, e.g.*, HHS, *Health Insurance Marketplaces 2015 Open Enrollment Period: March Enrollment Report* (2015), *https://aspe.hhs.gov/sites/default/files/pdf/83656/ib_2015mar_enrollment.pdf* (HHS report covering marketplace enrollment from November 15, 2014 through February 15, 2015, indicating that, based on enrollment through all marketplaces, 67 percent of people who selected a marketplace plan selected Silver.)

This final rule adds no new notice or authorization requirements. It reaffirms that when an employer offers an employee an inducement in return for his or her spouse's providing information about the spouse's manifestation of disease or disorder as part of a HRA, the HRA (which may include a medical questionnaire, a medical examination, or both), must otherwise comply with § 1635.8(b)(2)(i) in the same manner as if completed by the employee, including the requirement that the spouse provide prior knowing, voluntary, and written authorization when the spouse is providing his or her own genetic information, and the requirement that the authorization form describe the confidentiality protections and restrictions on the disclosure of genetic information. The employer also must obtain authorization from the spouse when collecting information about the spouse's manifestation of disease or disorder, although a separate authorization for the acquisition of this information from the employee is not necessary.

The Commission believes that GINA's existing authorization requirements prohibit many of the practices about which advocacy groups expressed concern. For example, these requirements already prohibit an employer-sponsored wellness program that collects genetic information from using an authorization notice that uses arcane legal language or is otherwise difficult to understand.[47] Moreover, although it is true that GINA's statutory language, at 42 U.S.C. 2000ff–1(b)(2)(B), states that the "employee" must provide prior, knowing, voluntary, and written authorization, the EEOC's original implementing regulations use the broader term "individual" when describing the prior, knowing, voluntary, and written authorization requirement.[48] As noted in the preamble to the proposed rule, the Commission believes that "individual" best reflects the intent of Congress, especially when considering the provisions in 42 U.S.C. 2000ff-1(b), which prohibit employers from requesting, requiring, or purchasing genetic information about both employees and their family members with limited exceptions, and the general purpose of the statute.

Section 1635.8(b)(2)(vi) Prohibition on Conditioning Participation in an Employer-Sponsored Wellness Program on Agreeing To Sale of Genetic Information or Waiving Confidentiality

Individuals and advocacy groups that commented on this portion of the proposed rule supported it but requested that it be strengthened. They argued, for example, that the provision should be expanded to not only prohibit conditioning participation in an employer-sponsored wellness program on agreeing to the sale of genetic information, but also other forms of sharing genetic information such as exchanges and transfers. Others argued that the provision should state that harm will be presumed from unauthorized disclosure of genetic information and that, if sharing does occur, employers should be required to reveal the identity of those with whom they shared the genetic information. One industry group expressed support for the notion that genetic information, as one type of protected health information, should not be sold, but noted that this did not necessarily apply to de-identified or aggregate data.

The Commission agrees that this prohibition should be expanded. The final rule therefore prohibits a covered entity from conditioning participation in an employer-sponsored wellness program or an inducement on an employee, an employee's spouse, or other covered dependent agreeing to the sale, exchange, sharing, transfer, or other disclosure of genetic information (except to the extent permitted by paragraph 1635.8(b)(2)(i)(D)), or waiving protections provided under § 1635.9. As explained above, however, the Commission does not believe that any further changes are needed because the confidentiality protections of § 1635.9, as well as the specific disclosure rules that apply to health and genetic services set forth at § 1635.8(b)(2), provide strong protections against disclosure of genetic information. (See *General Comments: Confidentiality Provisions.*)

Section 1635.8(c)(2) Employer Permitted To Seek Medical Information

Few people commented on the new example the EEOC added to this section of the rule. Two industry groups that did comment supported the EEOC's acknowledgement that employers may ask for information about the manifestation of disease, disorder, or pathological condition of a family member if that individual is receiving genetic services on a voluntary basis. However, comments indicated that clarification is needed for this example to be understood. As noted in the preamble to the proposed rule, this provision cross-references 29 CFR 1635.8(b)(2) to make clear that an employer may request information about the manifestation of disease, disorder, or pathological condition of a family member who is participating in voluntary genetic services only when all of the requirements for seeking genetic information as part of a voluntary health or genetic service, including the rules on authorization and inducements, are met. In other words, this example does not create an exception to the general rule that inducements in return for genetic information are only permitted in one specific circumstance—when an employee's spouse is asked to provide information about his or her manifestation of disease, disorder, or pathological condition as part of a HRA. We have revised the regulatory language so that it emphasizes the requirements of § 1635.8(b)(2), including the rules on authorization and inducements.

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[47] The GINA notice and authorization requirement, which was included in the EEOC's regulations pursuant to a specific statutory requirement, *see* 42 U.S.C. 2000ff-1(b)(2)(B), is only met if the covered entity uses an authorization form that (1) is written so that the individual from whom the genetic information is being obtained is reasonably likely to understand it; (2) describes the type of genetic information that will be obtained and the general purpose for which it will be used; and (3) describes the restrictions on disclosure of genetic information. The GINA notice and authorization rule also requires that individually identifiable genetic information is provided only to the individual (or family member if the family member is receiving genetic services) and the licensed health care professionals or board certified genetic counselors involved in providing such services, and is not accessible to managers, supervisors, or others who make employment decisions, or to anyone else in the workplace; and, finally, that any individually identifiable genetic information provided under 29 CFR 1635.8(b)(2) is only available for purposes of such services and is not disclosed to the covered entity except in aggregate terms that do not disclose the identity of specific individuals. *See* 29 CFR 1635.8(b)(2)(i).

[48] *See* 29 CFR 1635.8(b)(2)(i)(B).

Removal of Term "Financial" From Definition of "Inducement"

Industry groups, employer associations, and several United States Senators urged the Commission to alter this proposal so that the final rule applies only to financial incentives. These groups argued that an expansion of the definition of inducement would be inconsistent with the Affordable Care Act and Congressional intent and would increase administrative burden by requiring employers to calculate the value of in-kind inducements, such as gift cards, raffle tickets, and key chains. Many argued that applying the inducement rule to in-kind inducements would cause employers to eliminate them altogether.

The final rule reaffirms the Commission's proposal to remove the term "financial" as a modifier of the type of inducements discussed in the regulations and make clear that the term "inducements" includes both financial and in-kind inducements, such as time-off awards, prizes, or other items of value, in the form of either rewards or penalties. Contrary to several comments received, this clarification is consistent with the tri-Department wellness program provisions, which generally define a reward as "a discount or rebate of a premium or contribution, a waiver of all or part of a cost-sharing mechanism, an additional benefit, or any financial or other incentive."[49] Thus, because the incentive limits in the Affordable Care Act apply to in-kind incentives when they are offered within health-contingent programs, Congress and the tri-Departments clearly considered that these amounts would have to be calculated. Employers have flexibility to determine the value of in-kind incentives, as long as the method is reasonable.

Technical Amendments

We received no comments concerning the proposed technical amendments to the rule and they are therefore adopted without change.

Regulatory Procedures

Executive Order 12866

Pursuant to Executive Order 12866, the EEOC has coordinated this final rule with the Office of Management and Budget. Under section 3(f)(1) of Executive Order 12866, the EEOC has determined that the regulation will not have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local or tribal governments or communities.[50]

Although a detailed cost-benefit assessment of the regulation is not required, the Commission notes that the rule will aid compliance with Title II of GINA by employers. Currently, employers face uncertainty as to whether providing an employee with an inducement if his or her spouse provides information about the spouse's manifestation of disease or disorder on a HRA will subject them to liability under Title II of GINA. This rule will clarify that offering limited inducements in these circumstances is permitted by Title II of GINA if the requirements of section 202(b)(2)(A) of GINA otherwise have been met. We believe that a potential benefit of this rule is that it will provide employers that adopt wellness programs that include spousal inducements with clarity about their obligations under GINA.

The Commission does not believe the costs to employers associated with the rule are significant. Under HIPAA, as amended by the Affordable Care Act, inducements of up to 30 percent of the total cost of coverage in which an employee is enrolled are permitted where the employee and the employee's dependents are given the opportunity to fully participate in a health-contingent wellness program. This final rule simply clarifies that a similar inducement is permissible under Title II of GINA where an employer offers inducements for an employee's spouse enrolled in the group health plan to provide information about his or her manifestation of disease or disorder. Where participation in the employer-sponsored wellness program does not depend on enrollment in a particular group health plan, employers will be able to calculate the amount of the permissible inducement by reference to easily verifiable sources, such as the cost of the group health plans they provide or by reference to the second lowest cost Silver Plan available on the Exchange in the location that the Employer identifies as its principal place of business.

The Commission further believes that employers will face initial start-up costs to train human resources staff and others on the revised rule. The EEOC conducts extensive outreach and technical assistance programs, many of them at no cost to employers, to assist in the training of relevant personnel on EEO-related issues. For example, in FY 2014, the agency's outreach programs reached more than 236,000 persons through participation in more than 3,500 no-cost educational, training and outreach events. Now that the rule has become final, we will include information about the revisions to the GINA regulations in our outreach programs in general and continue to offer GINA-specific outreach programs which will, of course, include information about the revisions. As is our practice when issuing new regulations and policy guidances, we have posted two technical assistance documents on our Web site explaining the revisions to the GINA regulations.[51]

We estimate that there are approximately 782,000 employers with 15 or more employees subject to Title II of GINA[52] and, of that number, one half to two thirds (391,000 to 521,333) offer some type of employer-sponsored wellness program.[53] In the proposed rule, we assumed that nearly half of employer-sponsored wellness programs are open for participation by the spouses or dependents of workers, and used the highest estimates, to conclude that approximately 260,667 employers will be covered by this requirement.[54] Because the final rule now applies to a broader set of wellness programs offered by employers, we will increase these estimates and assume that 347,556 employers (two thirds of those who offer some type of wellness program) offer spouses an opportunity to participate in, at the very least, an employer-sponsored wellness program that is outside or not part of a group health plan. We further estimate that the typical human resource professional will need to dedicate, at most, 60 minutes to gain a satisfactory understanding of the revised regulations and that the median hourly pay rate of a human resource professional is approximately $49.41.[55] Assuming that an employer will train up to three human resource professionals/managers on the requirements of this rule, we estimate that initial training costs will be approximately $51,518,230.[56] The Commission sought comments on these cost estimates and responded to the one comment received above. (See the discussion in *General Comments: Burden.*)

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[49] *See* 26 CFR 54.9802–1(f)(1)(i); 29 CFR 2590.702(f)(1)(i); 45 CFR 146.121(f)(1)(i); *see also* DOL—Employee Benefits Security Administration, *FAQs on Affordable Care Act Implementation (Part XXIX) and Mental Health Parity Implementation,* Question 11 (2015), *http://www.dol.gov/ebsa/pdf/faq-aca29.pdf.*

[50] See *General Comments: Burden* for our response to the commenter who expressed disagreement with our burden calculations.

[51] *See Qs and As: The Equal Employment Opportunity Commission's Final Rule on the Genetic Information Nondiscrimination Act and Employer Wellness Programs,* EEOC, *https://www.eeoc.gov/laws/types/genetic.cfm* (last visited April 14, 2016); *Small Business Fact Sheet: Final Rule on Title II of the Genetic Information Nondiscrimination Act and Employer Wellness Programs,* EEOC, *https://www.eeoc.gov/laws/types/genetic.cfm* (last visited April 14, 2016).

[52] *See Firm Size Data,* Small Business Administration, *http://www.sba.gov/advocacy/849/12162* (last visited March 28, 2016).

[53] *See RAND Final Report, supra* note 36, xiv, *http://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR254/RAND_RR254.pdf; see also Employer Health Benefits Survey,* 6 (2014), *http://files.kff.org/attachment/2014-employer-health-benefits-survey-full-report* [hereinafter the *Kaiser Survey*]. According to the *RAND Final Report,* "approximately half of U.S. employers offer wellness promotion initiatives." By contrast, the *Kaiser Survey* found that "[s]eventy-four percent of employers offering health benefits" offer at least one wellness program.

Finally, GINA's plain language (at 42 U.S.C. 2000ff–(1)(b)(2)) and the EEOC's regulations (at 29 CFR 1635.8(b)(2) and (c)(2)) make clear that an employer must obtain authorization for the collection of genetic information as part of providing health or genetic services to employees and their family members on a voluntary basis. Consequently, this rule imposes no new obligations with respect to authorization for the collection of genetic information.

Paperwork Reduction Act

This rule contains no new information collection requirements subject to review by the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. chapter 35).

Regulatory Flexibility Act

Title II of GINA applies to all employers with 15 or more employees, approximately 764,233 of which are small firms (entities with 15–500 employees) according to data provided by the Small Business Administration Office of Advocacy.[57]

The Commission certifies under 5 U.S.C. 605(b) that this final rule will not have a significant economic impact on a substantial number of small entities because it imposes no reporting burdens and only minimal costs on such firms. The rule simply clarifies that employers that offer wellness programs are free to adopt a certain type of inducement without violating GINA. It also corrects an internal citation and provides citations to the Affordable Care Act. It does not require any action on the part of covered entities, except to the extent that those entities created documentation or forms which cite to GINA for the proposition that the entity is unable to offer inducements to employees in return for a spouse's completion of HRAs that request information about the spouse's manifestation of disease or disorder. We do not have data on the number or size of businesses that may need to alter documents relating to their employer-sponsored wellness programs. However, our experience with enforcing the ADA, which required all employers with 15 or more employees to remove medical inquiries from application forms, suggests that revising questionnaires to eliminate or alter an instruction would not impose significant costs.

To the extent that employers will expend resources to train human resources staff and others on the revised rule, we reiterate that the EEOC conducts extensive outreach and technical assistance programs, many of them at no cost to employers, to assist in the training of relevant personnel on EEO-related issues. For example, in fiscal year 2014, the agency's outreach programs reached more than 236,000 persons through participation in more than 3,500 no-cost educational, training and outreach events. We will put information about the revisions to the GINA regulations in our outreach programs in general and continue to offer GINA-specific outreach programs which will, of course, include information about the revisions now that the rule is final. We will also post technical assistance documents on our Web site explaining the revisions to the GINA regulations, as we do with all of our new regulations and policy documents.

We estimate that the typical human resources professional will need to dedicate, at most, 60 minutes to gain a satisfactory understanding of the revised regulations. We further estimate that the median hourly pay rate of a human resource professional is approximately $49.41.[58] Assuming that small entities have between one and five human resource professionals/managers, we estimate that the cost per entity of providing appropriate training will be between approximately $49.41 and $247.05. The EEOC does not believe that this cost will be significant for the impacted small entities.

Unfunded Mandates Reform Act of 1995

This final rule will not result in the expenditure by state, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year, and it will not significantly or uniquely affect small governments. Therefore, no actions were deemed necessary under the provisions of the Unfunded Mandates Reform Act of 1995.

List of Subjects in 29 CFR Part 1635

Administrative practice and procedure, Equal employment opportunity.

For the reasons set forth in the preamble, the EEOC amends chapter XIV of title 29 of the Code of Federal Regulations as follows:

PART 1635—[AMENDED]

■ 1. The authority citation for part 1635 is revised to read as follows:

Authority: 29 U.S.C. 2000ff.

■ 2. In § 1635.8(b):
■ a. Redesignate paragraphs (b)(2)(i)(A) through (D) as paragraphs (b)(2)(i)(B) through (E);
■ b. Add new paragraph (b)(2)(i)(A);

---

[54] Although the *Kaiser Survey* reports that 51 percent of large employers versus 32 percent of small employers ask employees to complete a HRA, *see Kaiser Survey, supra* note 50, we are not aware of any data indicating what percentage of those employers provide spouses with the opportunity to participate in the HRA. We therefore have substituted a more general statistic to allow an estimate of the number of employers who will be covered by the requirements of this proposed rule. *See* Karen Pollitz & Matthew Roe, Kaiser Family Foundation, *Workplace Wellness Programs Characteristics and Requirements* 5 (2016), *http://kff.org/private-insurance/issue-brief/workplace-wellness-programs-characteristics-and-requirements/* (noting that nearly half (48 percent) of employer wellness programs are open for participation by the spouses or dependents of workers, as well as workers).

[55] *See Occupational Employment and Wages*, Bureau of Labor Statistics, *http://www.bls.gov/oes/current/oes113121.htm* (last visited March 28, 2016).

[56] A study published in 2009 by the Society for Human Resource Management (SHRM) found that the median number of full-time equivalents for a HR department was three. *See* SHRM, *Human Capital Benchmarking Study 2009 Executive Summary*, 6 (2009), *https://www.shrm.org/Research/SurveyFindings/Articles/Documents/090620_Human_Cap_Benchmark_FULL_FNL.pdf.* Because we are not aware of any more specific data on the average number of human resources professionals per covered employer, we have based our estimates on this figure.

[57] *See Firm Size Data*, Small Business Administration, *http://www.sba.gov/advocacy/849/12162* (last visited March 28, 2016).

[58] *See Occupational Employment and Wages, supra* note 53.

■ c. Revise paragraph (b)(2)(ii) introductory text;

■ d. Redesignate paragraphs (b)(2)(iii) and (iv) as paragraphs (b)(2)(vi) and (vii);

■ e. Add new paragraphs (b)(2)(iii) through (v);

■ f. Revise newly redesignated paragraph (b)(2)(vii); and

■ g. Revise paragraph (c)(2).

The revisions and additions read as follows:

§ 1635.8 Acquisition of genetic information.

* * * * *

(b) * * *

(2) * * *

(i) * * *

(A) The health or genetic services, including any acquisition of genetic information that is part of those services, are reasonably designed to promote health or prevent disease. A program satisfies this standard if it has a reasonable chance of improving the health of, or preventing disease in, participating individuals, and it is not overly burdensome, is not a subterfuge for violating Title II of GINA or other laws prohibiting employment discrimination, and is not highly suspect in the method chosen to promote health or prevent disease. A program is not reasonably designed to promote health or prevent disease if it imposes a penalty or disadvantage on an individual because a spouse's manifestation of disease or disorder prevents or inhibits the spouse from participating or from achieving a certain health outcome. For example, an employer may not deny an employee an inducement for participation of either the employee or the spouse in an employer-sponsored wellness program because the employee's spouse has blood pressure, a cholesterol level, or a blood glucose level that the employer considers too high. In addition, a program consisting of a measurement, test, screening, or collection of health-related information without providing participants with results, follow-up information, or advice designed to improve the participant's health is not reasonably designed to promote health or prevent disease, unless the collected information actually is used to design a program that addresses at least a subset of conditions identified. Whether health or genetic services are reasonably designed to promote health or prevent disease is evaluated in light of all the relevant facts and circumstances.

* * * * *

(ii) Consistent with, and in addition to, the requirements of paragraph (b)(2)(i) of this section, a covered entity may not offer an inducement (financial or in-kind), whether in the form of a reward or penalty, for individuals to provide genetic information, except as described in paragraphs (b)(2)(iii) and (iv) of this section, but may offer inducements for completion of health risk assessments that include questions about family medical history or other genetic information, provided the covered entity makes clear, in language reasonably likely to be understood by those completing the health risk assessment, that the inducement will be made available whether or not the participant answers questions regarding genetic information.

* * * * *

(iii) Consistent with, and in addition to, the requirements of paragraphs (b)(2)(i) and (ii) of this section, a covered entity may offer an inducement to an employee whose spouse provides information about the spouse's manifestation of disease or disorder as part of a health risk assessment. No inducement may be offered, however, in return for the spouse's providing his or her own genetic information, including results of his or her genetic tests, or for information about the manifestation of disease or disorder in an employee's children or for genetic information about an employee's children, including adult children. The health risk assessment, which may include a medical questionnaire, a medical examination (*e.g.,* to detect high blood pressure or high cholesterol), or both, must otherwise comply with paragraph (b)(2)(i) of this section in the same manner as if completed by the employee, including the requirement that the spouse provide prior, knowing, voluntary, and written authorization, and the requirement that the authorization form describe the confidentiality protections and restrictions on the disclosure of genetic information. The health risk assessment must also be administered in connection with the spouse's receipt of health or genetic services offered by the employer, including such services offered as part of an employer-sponsored wellness program. When an employee and spouse are given the opportunity to participate in an employer-sponsored wellness program, the inducement to each may not exceed:

(A) Thirty percent of the total cost of self-only coverage under the group health plan in which the employee is enrolled, if enrollment in the plan is a condition for participation in the employer-sponsored wellness program. For example, if an employee is enrolled in health insurance through the employer at a total cost (taking into account both employer and employee contributions toward the cost of coverage) of $14,000 for family coverage, that plan has a self-only option for $6,000, and the employer provides the option of participating in a wellness program to the employee and spouse because they are enrolled in the plan, the employer may not offer more than $1,800 to the employee and $1,800 to the spouse.

(B) Thirty percent of the total cost of self-only coverage under the group health plan offered by the employer where the employer offers a single group health plan, but participation in a wellness program does not depend on the employee's or spouse's enrollment in that plan. For example, if the employer offers one group health plan and self-only coverage under that plan costs $7,000, and the employer provides the option of participation in a wellness program to the employee and the spouse, the employer may not offer more than $2,100 to the employee and $2,100 to the spouse.

(C) Thirty percent of the total cost of the lowest cost self-only coverage under a major medical group health plan offered by the employer, if the employer offers more than one group health plan but enrollment in a particular plan is not a condition for participation in the wellness program. For example, if the employer has more than one major medical group health plan under which self-only coverage ranges in cost from $5,000 to $8,000, and the employer provides the option of participation in a wellness program to the employee and the spouse, the employer may not offer more than $1,500 to the employee and $1,500 to the spouse.

(D) Thirty percent of the cost of self-only coverage available to an individual who is 40 years old and a non-smoker under the second lowest cost Silver Plan available through the Exchange in the location that the employer identifies as its principal place of business is located, where the employer has no group health plan. For example, if the cost of insuring a 40-year-old non-smoker is $4,000 annually, the maximum inducement the employer could offer the employee and the spouse would be no more than $1,200 each.

(iv) A covered entity may not, however, condition participation in an employer-sponsored wellness program or provide any inducement to an employee, or the spouse or other covered dependent of the employee, in exchange for an agreement permitting the sale, exchange, sharing, transfer, or other disclosure of genetic information, including information about the manifestation of disease or disorder of an employee's family member (except to the extent permitted by paragraph (b)(2)(i)(D)) of this section, or otherwise waiving the protections of § 1635.9.

(v) A covered entity may not deny access to health insurance or any package of health insurance benefits to an employee, or the spouse or other covered dependent of the employee, or retaliate against an employee, due to a spouse's refusal to provide information about his or her manifestation of disease or disorder to an employer-sponsored wellness program.

* * * * *

(vii) Nothing contained in paragraphs (b)(2)(ii) through (v) of this section limits the rights or protections of an individual under the Americans with Disabilities Act (ADA), as amended, or other applicable civil rights laws, or under the Health Insurance Portability and Accountability Act (HIPAA), as amended by GINA. For example, if an employer offers an inducement for participation in disease management programs or other programs that promote healthy lifestyles and/or require individuals to meet particular health goals, the employer must make reasonable accommodations to the extent required by the ADA; that is, the employer must make modifications or adjustments that enable a covered entity's employee with a disability to enjoy equal benefits and privileges of employment as are enjoyed by its other similarly situated employees without disabilities unless such covered entity can demonstrate that the accommodation would impose an undue hardship on the operation of its business. *See* 29 CFR 1630.2(o)(1)(iii) and 29 CFR 1630.9(a). In addition, if the employer's wellness program provides (directly, through reimbursement, or otherwise) medical care (including genetic counseling), the program may constitute a group health plan and must comply with the special requirements for employer-sponsored wellness programs that condition rewards on an individual satisfying a standard related to a health factor, including the requirement to provide an individual with a reasonable alternative (or waiver of the otherwise applicable standard) under HIPAA, when it is unreasonably difficult due to a medical condition to satisfy or medically inadvisable to attempt to satisfy the otherwise applicable standard. *See* section 9802 of the Internal Revenue Code (26 U.S.C. 9802, 26 CFR 54.9802–1 and 54.9802–3T), section 702 of the Employee Retirement Income Security Act of 1974 (ERISA) (29 U.S.C. 1182, 29 CFR 2590.702 and 2590.702–1), and section 2705 of the Public Health Service (PHS) Act (45 CFR 146.121, 146.122, and 147.110), as amended by section 1201 of the Affordable Care Act.

* * * * *

(c) * * *

(2) A covered entity does not violate this section when it requests, requires, or purchases genetic information or information about the manifestation of a disease, disorder, or pathological condition of an individual's family member who is receiving health or genetic services on a voluntary basis, as long as the requirements of paragraph (b)(2) of this section, including those concerning authorization and inducements, are met. For example, an employer does not unlawfully acquire genetic information about an employee when it asks the employee's family member who is receiving health services from the employer if her diabetes is under control. Nor does an employer unlawfully acquire genetic information about an employee when it seeks information—through a medical questionnaire, a medical examination, or both—about the manifestation of disease, disorder, or pathological condition of the employee's family member who is completing a health risk assessment on a voluntary basis in connection with the family member's receipt of health or genetic services (including health or genetic services provided as part of an employer-sponsored wellness program) offered by the employer in compliance with paragraph (b)(2) of this section.

* * * * *

■ 3. In § 1635.11, revise paragraphs (b)(1)(iii) and (iv) to read as follows:

§ 1635.11 Construction.

* * * * *

(b) * * *

(1) * * *

(iii) Section 702(a)(1)(F) of ERISA (29 U.S.C. 1182(a)(1)(F)), section 2705(a)(6) of the PHS Act, as amended by section 1201 of the Affordable Care Act and section 9802(a)(1)(F) of the Internal Revenue Code (26 U.S.C. 9802(a)(1)(F)), which prohibit a group health plan or a health insurance issuer in the group or individual market from discriminating against individuals in eligibility and continued eligibility for benefits based on genetic information; or

(iv) Section 702(b)(1) of ERISA (29 U.S.C. 1182(b)(1)), section 2705(b)(1) of the PHS Act, as amended by section 1201 of the Affordable Care Act and section 9802(b)(1) of the Internal Revenue Code (26 U.S.C. 9802(b)(1)), as such sections apply with respect to genetic information as a health status-related factor, which prohibit a group health plan or a health insurance issuer in the group or individual market from discriminating against individuals in premium or contribution rates under the plan or coverage based on genetic information.

* * * * *

Dated: May 11, 2016.

For the Commission:

Jenny R. Yang,

Chair.

[FR Doc. 2016–11557 Filed 5–16–16; 8:45 am]

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LIST OF PUBLIC LAWS

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Last List May 13, 2016

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